Amateur Radio

Volume 80
Numbers 1 & 2
January/February 2012
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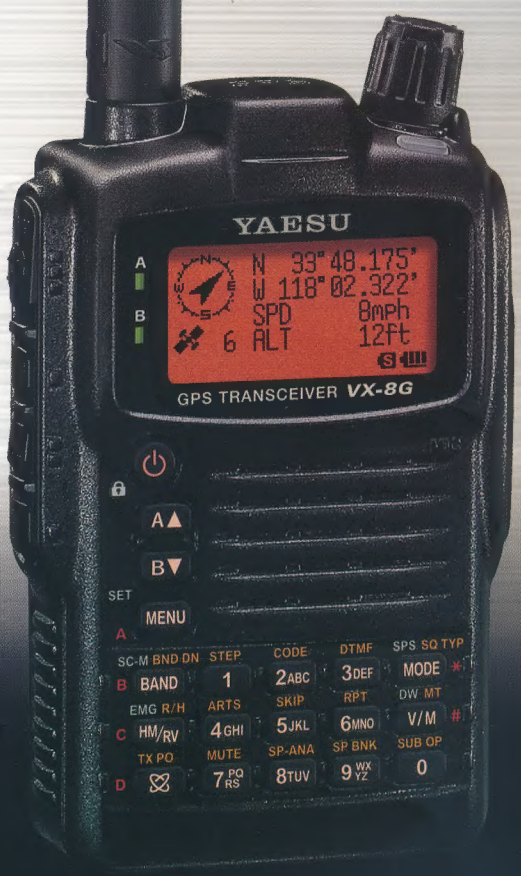

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Amateur Radio

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This month's cover

Our cover this month depicts the team from the Oceania DX Group YJ0VK DXpedition to Vanuatu. The group was active from 30 September to 12 October 2011. The team members are (left to right): Ian Jackson VK3BUF, Dianne Jackson VK3JDI, Tom Kramer NQ7R, Michael Van Den Acker VK3GHM, Luke Steele VK3HJ, Ben Pyfer N6MUF, Chris Chapman VK3QB (the team leader) and Lee Moyle VK3GK. Photo by Ian Jackson VK3BUF.

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Contributions to Amateur Radio

Amateur Radio is a forum for WIA members' amateur radio experiments, experiences, opinions and news. Manuscripts with drawings and/or photos are welcome and will be considered for publication. Articles attached to email are especially welcome. The WIA cannot be responsible for loss or damage to any material. Information on house style is available from the Editor.

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Photostat copies
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Disclaimer
The opinions expressed in this publication do not necessarily reflect the official view of the WIA and the WIA cannot be held responsible for incorrect information published.

Amateur Radio Service

A radiocommunication service for the purpose of self-training, intercommunication and technical investigation carried out by amateurs; that is, by duly authorised persons interested in radio technique solely with a personal aim and without pecuniary interest.

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Editorial

Peter Freeman VK3PF

Happy New Year!

I trust that all readers enjoyed a merry festive season and are now enjoying the New Year.

Personally, I had almost three weeks of family activities. My mother joined me during the week prior to Christmas for a stay and the Christmas celebrations. After a bit of retail therapy at the Boxing Day sales in Traralgon, we travelled up to Walwa in the north east of Victoria to visit my brother. En route, I had a couple of contacts on 40 metres from inside the Alpine National Park, trying to promote the Keith Roget Memorial National Parks Award and qualify by activating some Parks that were located near my route. After several days at Walwa, and another Park activation, we travelled into Wodonga to visit my other brother and his family for a few days before returning home to Churchill. After another few days at home, it was time to return mother back to her home on the Bellarine Peninsula. I took the Queenscliff-Sorrento ferry for the trip home, and activated the Point Nepean and Mornington Peninsula National Parks. All together I managed to activate eight National Parks over the two weeks or so of travelling, so I am now well on the way towards qualifying for the Award based on activating parks. More detail about the Award can be found on the Amateur Radio Victoria website.

During one of the contacts I made, whilst discussing the Award with a VK4 amateur, the question was raised about which parks qualified. I was able to report that only Victorian National Parks qualified for the award. Perhaps other states, or even the WIA, might consider establishing a similar award for working or activating National Parks around the country? If amateurs think that it is a good idea, let your local club or state Advisory Committee know of your thoughts. The next challenge after deciding to develop the idea would likely to be finding a volunteer to manage the award...

New printing and distribution processes

After considerable discussion and consideration of our options, the WIA has decided to move the printing of *Amateur Radio* to a new printer and distribution to a new mailing house.

As part of the change of arrangements, we have decided to adopt a glossier paper stock and to adopt colour throughout the magazine. Hopefully the transition will be smooth, but we might experience some hurdles. Remember that any issues concerned with distribution should be directed to the WIA office.

Production remains with Fontana Design and I am certain that Sergio will be working hard to ensure that the transition is as smooth as possible.

Contributions

We are slowly catching up with the publication of backlogged articles, most of which have been ready for publication for up to 12 months. I anticipate that most such articles will have been published in the next issue or two, leaving us with articles submitted up to about six (6) months ago.

At the moment, we have predominantly technical articles in stock, so consider writing up your account of the latest Club event or of your operating experience.

Continued on page 6

WIA comment

Michael Owen VK3KI

Cost recovery and the WIA's charges

In the News section of this issue is an item "ACMA Proposes Cost Increases: WIA Costs Not Affected". It was published in late November last year, in response to the strong concern expressed by a number of amateurs who were concerned that the higher examination costs proposed by the ACMA for examinations it conducted would also apply to WIA examination charges. The ACMA was proposing to charge $345 for the examination or reassessing an examination for the Advanced AOCP and $230 for the examination or reassessing an examination for the Foundation AOCP.

In fact, I had planned to write this Comment about the whole issue of cost recovery. I had attended a most constructive meeting of affiliated clubs in Adelaide, and during that meeting some doubt had been expressed about the fees the WIA was charging, some holding the view that the WIA fee included a very substantial margin.

Everyone seems to be prepared to accept that the WIA is bound by its agreement with the ACMA to charge fees "on a cost recovery basis only", and that it has to justify its fees on an annual basis to the ACMA. . But there seemed to be a feeling "how on earth could just processing one paper cost the WIA $70?"

But what we are concerned with is the total cost to the WIA of providing a service. That cost must then be spread over the number of actual examinations for which we charge.

Let us look at what that really means.

By keeping time sheets for sample periods, we can work out how much time each employee spends on exam matters. That means the time taken to prepare and send packs, including any time for phone calls. Then, when the packs come back, the processing is fairly obvious. But what may not be obvious is the time taken every now and then in calling a candidate to get some information that should have been on the form, for example height, or if it is something that must be completed by an Assessor, sending the form back to the Assessor. There is also the time for preparing the certificate of proficiency, making a copy for the records, and sending it.

Time also includes time in answering queries from both Assessors and the general public.

But then there are the other costs. Some again, are obvious such as the cost of paper and envelopes, the cost of the Express Post envelopes we send to each Assessor with the packs for them to return the pack. But others may not be so obvious. For example, the cost of the printing of the certificates of proficiency is spread over a couple of years.

Then there is insurance. Various policies are referable, in part, to the examination service and must be taken into account.

But there is one policy that indemnifies the Assessors against their possible liability for an error and the whole of that premium is referable to the exams. That policy costs around $5,000 a year. If we conduct 1,000 exams in year for which a fee is paid, (because Foundation Theory and Practical is covered by a single fee) that insurance policy alone adds $5 to the cost of each exam.

That probably is the best example of how the cost of managing the system can be increased.

We recently said that we would, if an Assessor requested it, meet the costs of certain travel or a police check.

The first was because some of our Assessors were being asked to provide assessments for clubs other than their own clubs, but which did not have Assessors, and were finding the cost of travel a disincentive to helping with these special assessments. The second arose because it seemed quite unfair that in some states the working with children check was free, in some others $5 and in one territory $43.

Of course, immediately we do that, we also add to cost.

And then there are all the other costs. Telephone, power, a notional rent for the space used for providing the exam service, (including storage of all of the records), equipment depreciation and so on are costs that at least in part relate to this service.

And you must do exactly the same exercise for callsign recommendations!

I can assure you that the cost is not made up and does not include a large margin. Indeed, if the number of candidates drops, we will struggle to keep the costs down.

I hope that explains how the costs of the WA exams are calculated.

The ACMA charges may be all rather academic, because I do not think the ACMA has conducted any examination since at least 2005.

Continued on page 6

WIA news

ACMA to permit higher power for Advanced licensees on trial basis

The ACMA has advised the WIA that it intends to accede to the WIA's request that Advanced licensees may apply for a variation of their licence to permit higher power from a fixed location on a trial basis from 1 March 2012. The ACMA has stressed to the WIA that it remains concerned about the risk of interference from the use of higher power. At the end of 12 months the position will be reviewed by the ACMA.

The ACMA has adopted this approach to enable any particular difficulties to be identified and satisfactory solutions found to, in the words of the ACMA, "*enable the trial to progress to appropriate ongoing arrangements from early 2013.*" The ACMA will publish the changes to the licence process and forms setting out the further information needed for an application for higher power before 1 March 2012.

While the details are still subject to discussion, the following principles will be applied:

- Transmitter power outputs up to 1,000 watts PEP may be permitted, though the emission modes to which this limit will apply are still subject to consideration. It should be noted that lower power limits may be specified in some cases.
- The higher power limits will only be permitted on the amateur HF bands where the amateur service is the primary service. The WIA has requested that the band 7100 to 7200 kHz be also included, and this is being considered.
- Higher power will not be permitted in certain areas that will be identified by the ACMA on its website.

Licensees will continue to be obliged to comply with the EME requirements.

For the period of the trial, licensees permitted to use higher power will be encouraged to keep a full log of all transmissions on bands where the higher power is permitted, noting in each case the power in fact used.

The WIA's original request is fully set out in the November 2010 issue of the WIA's magazine *Amateur Radio*. This is a preliminary announcement and further details will be published as they become available before March and after the Christmas break. The WIA anticipates working closely with the ACMA on this issue.

Amateur station Inspection process

The WIA and staff from the ACMA have agreed on the steps to be undertaken leading up to and during the course of a licensed amateur station inspection. The process is a balance between operational efficiency of ACMA staff and the individual rights and obligations of an amateur operator.

It should be noted that Radio Inspectors acting under the Radiocommunications Act (the Act) do not generally have automatic rights, other than common law rights, to enter an individual property unless permission is granted by the property occupier. However, in emergency situations the Act provides that Inspectors may enter premises to stop actual interference to certain safety, police and fire services. Circumstances where radio equipment may be seized are also specified in the Act. In the conduct of an investigation Inspectors may make a sworn statement and apply to the Court for a "Search Warrant" from a Magistrate. Generally there has to be sufficient evidence to form a reasonable belief that there has been one or more significant breaches of the Act in order to obtain a warrant. An Inspector can execute the warrant at any time specified on the warrant and station operators should provide all necessary assistance to enable the warrant to be executed.

In contrast amateur station inspections are normally a routine activity, often with an educational objective. Ordinarily, an Inspector will arrange a mutually convenient time by telephone with a licensee to inspect the licensee's amateur station. If the licensee is aged under 18, the appointment shall be made through a parent or guardian or other appropriate adult person in the position of a parent, subject to entry authorised in emergency situations (as referred above). If the licensee is aged under 18, the inspection shall be carried out in the presence of the parent or guardian or other appropriate adult person. In some cases, where an Inspector is working in a particular area, it may be convenient to visit amateurs in the area to undertake station inspections and in such cases it may not be possible to make an appointment by telephone.

It has been agreed that the following steps will be taken in such cases when an Inspector has been unable to make an appointment:

1. The ACMA staff will select the licensee(s) to be visited by the proximity of their station(s) to other work in an area;
2. The ACMA staff will ascertain the age of each licensee to be visited;
3. If the licensee is aged under 18, contact shall be made through a parent or guardian or other adult person in the position of a parent;
4. Upon arrival the Inspector shall identify themself and display his or her identification card. The WIA advises that the licensee should note the name(s) of the Inspector(s);
5. The Inspector shall request permission to enter and to inspect the station. If it is not convenient to do so the inspector should advise the licensee that the inspection may take place at another time more convenient to both the ACMA and the licensee.

6. The ACMA staff shall always ensure that if the licensee is aged under 18 any inspection is carried out at all times in the presence of a parent or guardian or other adult person (subject to entry authorised in emergency situations).
7. The licensee shall assist the Inspector in the conduct of the inspection and possible testing of equipment.

At the conclusion of the inspection, and if there are any irregularities, the Inspector may hand an Advice or Warning Notice to the Licensee identifying any irregularities and recommending any action to be undertaken by the licensee.

All amateur licensees should be aware of, and must operate their station in accordance with, the Act and the licence conditions relating to the type of licence held. It is expected that ACMA staff and Amateur operators will work co-operatively in accordance with the above procedure and always bear in mind the individual rights of the licensee.

ACMA proposes cost increases: WIA costs not affected

A number of amateurs have drawn attention to the ACMA's current review of certain of its costs and its proposal to increase some costs affecting amateurs. In particular, in general terms, it is proposed to increase the costs of Advanced Standard and Foundation exams or assessments conducted by the ACMA by 68% or 69%.

Under the Commonwealth Cost Recovery Guidelines, the ACMA is bound to review these costs every 5 years and the last time this was done was in 2007. These cost increases will affect only the cost charged by the ACMA and not the cost charged by the WIA for providing the same service. Under its agreement with the WIA there are only two situations where the ACMA, rather than the WIA, will provide any of these exam or callsign services. One is where the ACMA has reasonable grounds for believing that a qualified operator will probably be unable to pass an examination, part of a process leading to the cancellation of a licence. The other situation is where the WIA ceases to provide the services. The WIA has no intention of giving up its functions in respect of the qualification of amateurs or the recommendation of callsigns.

Under its arrangements with the ACMA, the WIA is bound by the Commonwealth Cost Recovery Guidelines, except that its costs are reviewed every year.

The cost of an amateur licence is made up of two components, the costs incurred by the ACMA in managing the system, and a tax component. In accordance with the Cost Recovery Guidelines, the ACMA is bound to increase the management cost component by the cost increases it has incurred. That is why it is proposed to increase the cost of amateur licences by $5.

As is the case for the WIA charges, the cost increases proposed by the ACMA depend on fact: has the cost it incurs to provide a service increased and if so by how much? The WIA believes that it is likely that the ACMA will be able to demonstrate the cost increase it asserts. The WIA also believes that once again the value of the contribution of so many to the examination system that it manages for the ACMA is amply demonstrated.

Emergency Communications operator training now "on line"

To date well over 100 emergency communications operators across Australia have been trained by the WIA Emergency Communications Operator training program. This program, Certificate II in Public Safety (SES Operations), is now available "on line" and can be completed as a self- paced program. The WIA registration requirements apply.

The process to undertake the course can be commenced by completing the WIA on line application form found on the WIA web site in the Members area under the Emergency Communications section.

The on line program will assist those wishing to complete the program but who are unable to attend a formal training session or those who have missed a section of the training as well as those who want to complete the program and provide a service to their community.

Storm disaster hits Southern Philippines

The death toll has reached 1,250 in the storms that swept the Southern Philippines on December 16 to 18 with many more still missing. Eddie Valdez DU1EV reports that Typhoon Sendong triggered massive flooding and has greatly affected the DU9 call district. He advises that prior to the Typhoon, the Ham Emergency Radio Operators (HEROs) activated the emergency frequencies on 40 m and 2 m. "The HEROs were assisting the local government units by providing communications until regular power could be restored," said Eddie DU1EZ.

Saving almost 1,000 lives

The Radio Amateur Society of Thailand (RAST) Secretary Paul Wacharaphol HS4DDQ reports his team helped to save almost 1,000 lives by coordinating rescue communications in cases of medical emergencies during the severe flooding. He coordinates the emergency medical communications at Public Health Ministry on Ngarmwongwarn Road and using the callsign HS0AC.

Speaking at a small RAST gathering at Sena Place Hotel on Sunday November 6, Paul HS4DDQ told how the emergency unfolded.

The National Broadcasting and Telecommunications Commission (NBTC) has praised the role that radio amateurs have been playing to help people cope with the disaster by providing communications support and this have been especially helpful in flooded areas where several mobile phone cell sites have failed. Government agencies have been able to take advantage of the amateur radio communications infrastructure when their own networks failed.

Proposed amateur MF allocation receives a boost

Dale Hughes VK1DSH reports that the proposal to allocate a part of the medium frequency band to the amateur service at the World Radio Conference in 2012 received a boost with the mid December release of the Asia-Pacific Common Proposals that were developed at the 5th Meeting of the APT Conference Preparatory Group for WRC-12 (APG2012-5) 29 August 2011 - 3 September 2011, Busan, Republic of Korea. During this meeting the various nations of the Asia-Pacific region discussed many of the issues that will be addressed at WRC12 and attempted to come to a regional consensus position.

The proposal of interest to the amateur service is "to consider an allocation of about 15 kHz in parts of the band 415–526.5 kHz to the amateur service on a secondary basis, taking into account the need to protect existing services" and this proposal was supported by a comfortable margin of Asia-Pacific administrations responding to the voting request.

The successful development of a regional position supporting an amateur MF allocation increases the chances that the proposal will be accepted at WRC-12.

The amateur radio service is represented at the APT meetings by delegates from the IARU Region 3 and by members of national amateur radio organisations who are part of delegations from national administrations.

Dale Hughes was a member of the Australian delegation to the Busan meeting and the earlier meeting in Hong Kong in December 2010, nominated and paid for by the WIA.

Dale will be representing the amateur service as a member of the Australian delegation to WRC-12, again nominated by the WIA.

WIA comment

Continued from page 3

But there is one important lesson we can learn from the ACMA proposed charges, described in the News item:

Why are the WIA costs so much less than the ACMA costs? For the simple reason that so much is done on a voluntary basis. All the Assessors and Learning Facilitators, the WIA's RTO and the many others involved one way or another give their time.

Knowing how much it costs the WIA in fact to provide the services is very important in two ways. One is that it is not in the interests of amateur radio for the costs of becoming an amateur to be more than the minimum. The other is that if the WIA is charging less than the actual cost it incurs it means that its members are paying for the shortfall, which will ultimately lead to even further membership fee increases.

Editorial

Continued from page 2

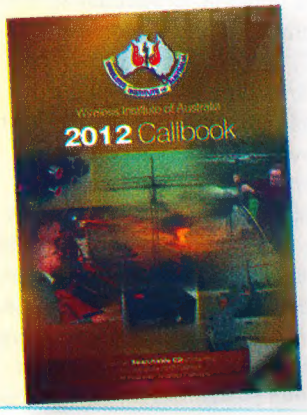
The one issue with which we continue to struggle is the supply of high quality photographs suitable to use on the cover. Ideally, the candidate photograph should relate to an article published in that issue of *AR*.

Remember to set your camera to record the image at the highest possible resolution (i.e. large file size) but send us your photo at lower resolution – say as a jpg image of around 1 MB. If we think that your photo is suitable, we will contact you seeking the higher resolution image.

Guidelines on how to prepare an article can be found on the WIA website – look for the *AR* magazine pages under "Members Area" and click the link to "Contributing material".

Cheers,

Peter VK3PF



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As a special offer to all WIA affiliated clubs the WIA is pleased to offer **free delivery** for a box of 25 callbooks delivered direct to your club anywhere within Australia. Full details, including order form, are at *www.wia.org.au/members/clubs/clubpurchases/*

DX station YJ0VK activated for 2011

Ian Jackson VK3BUF (YJ0AUF)

Photo 1: The YJ0VK team on the beach below the WARC beam antenna.

For the first two weeks of October 2011 the Oceania DX Group (OXDG) activated the Vanuatu call YJ0VK from just outside Port Vila. Of the team of eight operators, four were GGREC members and two travelled from the USA. The venue was a small resort with a collection of 12 well-appointed huts on the beach. The four of these fronting the ocean only 20 metres away were made available to the DX group. While there were some other guests coming and going from time to time, the resort owners were very accommodating in letting the team scatter the beachfront with coax, antenna wire and HF beams. They even supplied some bamboo poles and enthusiastic staff to scale the 15 metre palm trees with our antenna wires. Three meals a day were prepared for us in a wall-less central pavilion with a grass roof.

The four team members who are also GGREC members were Chris VK3QB, Michael VK3GHM, Dianne VK3JDI and Ian VK3BUF. Other team members were Luke VK3HJ, Lee VK3GK, with Ben N6MUF and Tom NQ7R from the USA. Vertical antennas were a 20 metre vertical on the beach, plus a 12 metre squid pole with an automatic antenna tuner. A bamboo mounted three element beam looked after the WARC bands, plus there were a couple of long wire antennas to choose from. Three of the transceivers were the 200 watt Kenwood TS480HXs, which worked really well. The fourth unit was a K2 transceiver operated largely by Ben and Tom - although there was much shuffling of operators between the four stations. Power supplies, headsets, foot switches, CW paddles and RTTY interfaces made up the rest of the hardware. All of this travelled with the team on the plane under the label of 'sporting goods', which was treated with some scepticism until Chris VK3QB, the team leader, showed the rules of the Oceania DX contest to the customs officials. Chris had spent some months in preparation for this, compiling detailed spreadsheets of equipment and their respective weights. Conditions were pretty good, with around 14,000 contacts made with 126 countries, with much of this on CW and about 1050 contacts on RTTY.

Photo 2: Installing the multi-band vertical.

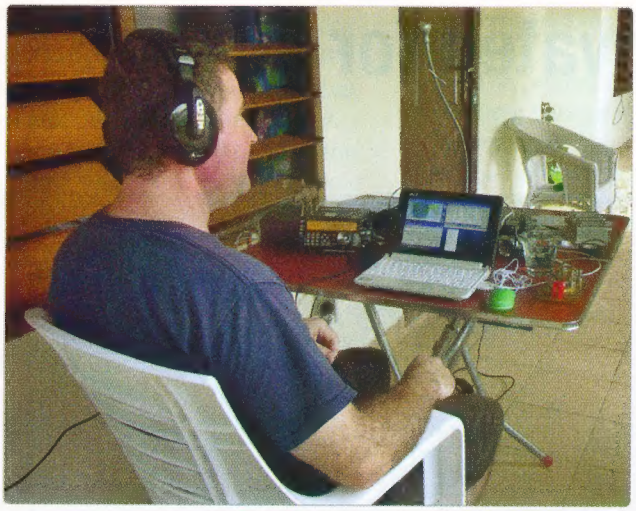


Photo 3: Chris VK3QB operating station #1.

This sounds like an awful lot of contacts in a short period of time but it is what can transpire when you have multiple radios, multiple operators and multiple HF pileups. It is a very peculiar dynamic.

You find a clear spot on the spectrum, put out a couple of calls that attract some polite attention and all seems very casual and gentlemanly. Then someone posts your callsign and frequency on one of the DX sites and there is the instant mayhem of a hundred stations calling at once. At this point you need to work split. This is where you must call on one frequency and ask everyone else to reply a few kHz up; otherwise the DX station's calls are lost in the bedlam. Coordinating the callback of these stations more closely resembles the conducting an orchestra. The SSB pandemonium sounds like the floor of a stocks trading room where the price of pork bellies have just crashed. The RTTY pileups resemble a thousand bicycle bells being rung at the same time. The CW scramble is reminiscent of ... I don't know... let's go with 'a container load of xylophones in a cement mixer' until something better comes along.

It wasn't all CQ this and QRZ that, there was ample time for a bit of shopping and exploring the islands. Of course there are also the Kava bars. This is a mildly narcotic concoction that everybody agrees tastes like crap. Even the locals who have been drinking it for all their entire lives think it tastes like crap. The principal topic of conversation is therefore which brew is the most potent and tastes the least crappy. It numbs the tongue, thickens the lips, makes your eyes light sensitive and makes one not care about very much at all. While it does not actually turn you into the walking dead seeking brains to devour, it is perhaps the next best thing.

Four of the team members took a two-day trip to the island of Tanna, about 180 km to the south, and only an hours flying in a six-seat yellow 'Air Taxi.' After establishing the overnight accommodation in a resort there, the group were escorted on a two hour 4WD trip across the island jungle that would have made Indiana Jones proud. At the end of this journey was the active volcano Yasur, This is a black-ash cone that rises above the forest with an aperture of about one kilometre.

At the bottom of this protruding crater is a bubbling cauldron of raw lava that explodes and showers fireworks every few minutes. The shock waves were reminiscent of the Mythbusters cement mixer exploding over and over again. Fortunately it was only at Level 1 during the visit. Apparently, at Level 2, rocks the size of photocopiers land in the car park. At Level 5 you would want to be on a different continent!

Photo 6: One of the frequent lava explosions we saw.

Photo 4: The ubiquitous Kava - the colour says it all.

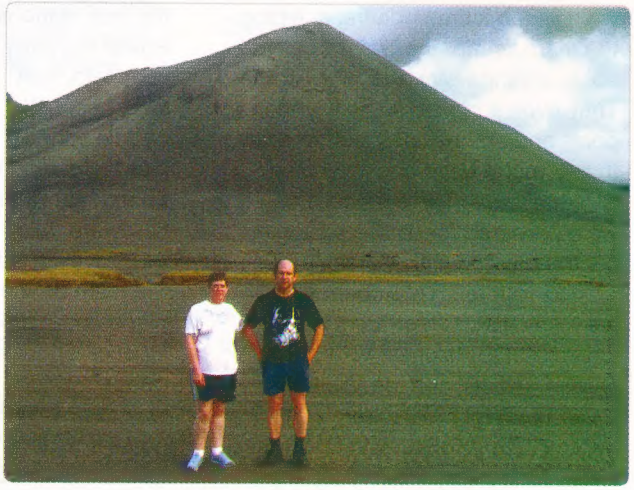
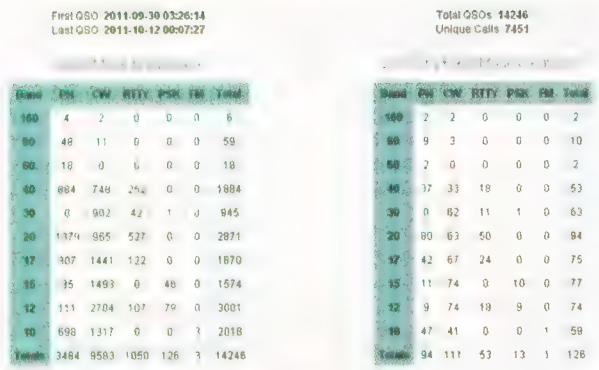


Photo 5: Dianne VK3JDI (YJ0ADI) and Ian VK3BUF (YJ0AUF) at Mt Yasur volcano, Tanna.



First QSO 2011-09-30 03:26:14
Last QSO 2011-10-12 00:07:27

Band	PH	CW	RTTY	PSK	FM	Total
160	4	2	0	0	0	6
80	48	11	0	0	0	59
60	18	0	0	0	0	18
40	884	748	252	0	0	1884
30	0	902	42	1	0	945
20	1374	965	527	0	0	2871
17	307	1441	122	0	0	1870
15	35	1493	0	46	0	1574
12	151	2704	107	79	0	3001
10	698	1317	0	0	3	2018
Totals	3484	9583	1050	126	3	14246

Total QSOs 14246
Unique Calls 7451

Band	PH	CW	RTTY	PSK	FM	Total
160	2	2	0	0	0	2
80	9	3	0	0	0	10
60	2	0	0	0	0	2
40	37	33	18	0	0	53
30	0	62	11	1	0	63
20	80	63	50	0	0	94
17	42	67	24	0	0	75
15	11	74	0	10	0	77
12	9	74	19	9	0	74
10	47	41	0	0	1	59
Totals	94	111	53	13	1	126

Photo 7: Some of the data now viewable on the YJ0VK web site.

```
 N3JT  N3JT N35h33J
111000' 11:11:32 TX>

N3JT N3JT UR 599-599 DE YJØVK BK
111000' 11:11:40 RX>
111000' 11:11:51 TX>

N3JT N3JT UR 599-599 DE YJØVK BK
111000' 11:11:59 RX>
MDE N3JT QSL TU 599 599 599 599 T 73 BK

111000' 11:12:10 TX>
N3JT 73 DE YJØVK K K
111000' 11:12:15 RX>
ME J  VE3EJ QUQS GQPDQVP3E  VE3EJ I
111000' 11:12:27 TX>
```

Photo 8: A screen fragment of a RTTY contact.

Photo 9: Beware of the Man Eating Crab! (Chris VK3QB).

It is important to include a reference here to the 'Data Collection Process' associated with all of these radio contacts. This is a far cry from the traditional scrawling of callsigns in an exercise book with a pencil stub under dim light. With contact times, dates, signal strengths, bands and modes to be recorded and officially authenticated for thousands of contacts, a higher level of organisation is needed. Each station had a PC equipped with logging software. In Vanuatu this was the N1MM program, with the MMTTY package supporting RTTY logging. Each day Michael VK3GHM (YJ0AHM) would do the rounds of the various PCs with a memory stick, merge the files and upload them by internet to Allan VK2CA, who would then publicly list the results and generate statistical reports.

This is another important measure of performance of a DXpedition, as the operators around the world want updates on which bands and modes are successfully being activated. The YJ0VK web site was accessed more than 20,000 times while the station was active. One question the reader may be asking themselves is 'Why'? What is the point of flying into the middle of the Pacific Ocean simply to exchange signal strength reports with 14,000 amateur stations? The context for the answer is important. There are around 150,000 active amateur DXers around the world. For them it is a collector's hobby. Getting acknowledgement from 100 countries, then doing it again for a specific RF band, then doing it again for a specific mode like CW or RTTY; this is the challenge.

For them, getting access to a rare country prefix on several bands and modes contains the same thrill of the hunt present in game fishing, treasure hunting or stamp collecting. It is a symbiotic experience. A DXpedition is a service to the greater amateur community, with standards, conduct and performance being measured and discussed on email postings around the world. In doing so, it provides the participants with a genuine need for organisation, preparedness and training. It is a collective challenge – and a lot of fun along the way.

Photo 10: Some of the YJ0VK team with the resort owners and staff.

An earth stake with a difference

Warren Stirling VK3XSW

Photo 1: The prototype slide hammer earth stake.

I recently acquired one of the small GMC petrol generators, with the intention of field use and I actually thought I had read the manual before using the generator (amazing huh!). The manual mentions earthing the generator for safety purposes so I considered how best to achieve this, with the minimum of effort in actually doing it.

An earth stake, intended for the purpose, was my first choice but the problem of remembering a hammer to hit the blunt end with so that the pointy end is forced into the ground is usually only addressed *after* you have arrived on site and *then* remembered that the hammer is several hours behind you...

So, how to remember the earth stake and the hammer at the same time? The easiest way is to tether the hammer to the earth stake with a rope or chain, but to do that so you can still hit the blunt end of the earth stake with enough force to be useful means that the rope or chain together with the hammer will present a tripping hazard once you have finished. Not to mention the flared end on the earth stake, resulting from being repetitively hit with a hammer, will usually result in some easily found sharp edges to cut yourself on. Removing the earth stake from the ground will also present a problem because you cannot use a normal hammer in reverse, at least to remove earth stakes!

There is one hammer I have seen that can be used in either direction. This is the slide hammer, as used in the automotive industry. I thought that the basic idea of a weight being moved by hand up and down a rod could be applied to the earth stake problem, but with some changes. The basic design of the slide hammer is a weight manually slid with some force along a rod so it impacts either of two stops fixed to the rod so that the rapid de-acceleration of the weight hitting either stop forces the rod one way or the other, depending on the weights' direction of travel. The resulting redesign and problem solving resulted in the prototype slide hammer earth stake.

Having used a slide hammer I decided one of the changes would be to put the two external stops inside the weight as having end stops outside the weight makes it so much easier to jam your fingers between the weight and either stop, or both stops if you're particularly clumsy. This is something you will try and do only once.

The other problem is attaching the earth lead to the earth stake. I have tried the earth clamp commonly found connected to domestic switchboard earth stakes and while it is simple and, if correctly implemented, reliable, I felt that a better approach to the earth clamp was warranted as it would be used a lot more often and in worse conditions than a domestic earth clamp, given most field stations are out in the open, on hilltops where you do not usually find domestic switchboards, which is why we have portable generators in the first place.

The earth clamp redesign is not as simple as it sounds; the easy approach of a wire under a clamp fixed to the rod will work but results in an early failure of the lead to rod connection as the mechanical shock of the weight hitting either of the end stops is transmitted along the rod to the clamp and earth lead, since they are all a single mechanical assembly. Isn't inertia wonderful!

The solution to the inertia problem was to design the clamp so it moves freely along the rod while you are forcing the pointy end of the rod into the ground but is then locked against the rod by tightening a screw which has a butterfly head. One benefit of this is the clamp can be placed right at ground level as this is where the loose clamp ends up anyway, another is that with the clamp on the ground there is a large gap between the earth clamp at one end of the rod and the sliding weight at the other end, which makes it much harder to jam your fingers between them. The earth wire has a lug fitted and then the lug is put over a threaded stud on the clamp where it is retained by a nut with a butterfly head, so no screwdriver to lose.

To make a slide hammer earth stake will require use of a welder, lathe, with both self-centering and independent jaw chucks, a small milling machine, a drill press and various taps. In my case I have none of these, but I knew someone who does...

Having owned up to all that, the design is not complicated to make. However, attention to detail is important if it is to work properly. The only critical dimensions relate to the clearances between the moving parts; the internal stop must be of a diameter to move freely inside the sliding weight without restricting

the movement of the sliding weight, similarly the hole in the end of the sliding weight must allow easy passage of the earth stake without binding, while also keeping the movement of the weight parallel to the earth stake; this parallel movement is necessary so that the ends of the sliding weight hit square on the internal stop, transferring maximum force to it and so making driving the earth rod in either direction easier.

Construction

The first thing to do is source the earth stake, which should be copper clad steel for strength. The one used in the prototype was purchased from an electrical wholesaler and was selected based on its diameter as I did not want it to bend while in use. Unfortunately this means the stake you will want will be much longer than required.

One end of the stake has a taper, to make it easier to insert into the ground and the other end is blunt. The stake used in the prototype is 12 mm diameter and was cut down to approx 760 mm in length, measured from the tapered end. The existing taper is approximately 45 degrees, this was changed to approximately 20 degrees by turning the stake in a lathe to make inserting the earth stake easier as it will be inserted and removed from the ground more than once.

The sliding weight is made from a piece of steel pipe and some steel bar stock. The steel pipe is of a diameter small enough to be easily held in one hand but large enough to accommodate the cylindrical weights that provide the inertia that makes the slide hammer work. Any steel tube available that is long enough and can be comfortably gripped will do, but bear in mind the assembled sliding weight must be heavy enough to drive the earth stake into the ground without being awkward to use. It also has to be robust enough to put up with the repeated impacts.

In the prototype the steel pipe is approximately 34 mm diameter with a 3 mm wall thickness. Each end of the steel pipe is squared off in a lathe so that when each cylindrical weight is fitted the weight is parallel to the bore of the pipe.

The end stop

The end stop is a solid cylinder and in the prototype is around 37 mm long and turned to a diameter that slides easily inside the tubular steel used as the 'handle' of the sliding weight, but without being too loose in the bore, which might cause the stop to jam. The diameter of the end stop must be found by trial and error as the diameter of the internal bore of steel pipe is not consistent for the length of the bore. It will vary! The end stop must also be robust enough to allow for the impacts of driving the earth stake into dry ground or heavy clay.

The blunt end of the earth stake is turned in a lathe to *just* remove the copper cladding and expose enough of the steel core to run the length of the end stop. A hole is bored through the end stop, of a diameter to be a neat fit on the exposed steel core of the earth stake. The end stop is turned in a lathe so that each end face is square to the bore. This is important as each face of the end stop must be parallel to the impact face of each cylindrical weight to prevent the earth stake bending in the handle.

Each end of the hole has a deep chamfer which will be filled with weld when the earth stake is inserted. Note that silver soldering will *not* put up with the impact stress for very long and is not the recommended fixing method. Before and after welding the end stop to the earth stake, check that the stop and the earth stake are concentric. The welds are then turned flush in a lathe, hence the deep chamfer, so that both faces of the end stop present a smooth surface to the internal face of each cylindrical weight. Each face of the end stop is chamfered at the rim so that the slight expansion of each end face, due to repetitively hitting the face of each end weight, will not foul the bore of the steel pipe.

The cylindrical weights

The two cylindrical weights that form the ends of the sliding weight are turned from steel bar stock and are of a diameter slightly larger than the steel tube. The face that each weight presents to the end stop must be square to the weights' diameter so that impact pressure is evenly spread across the face of the weight. This prevents the earth stake from bending and jamming the end stop in the steel tube.

In the prototype the blind weight, which does not have a hole, is 64 mm long and has two concentric cylindrical sections; the exposed cylindrical section is 42 mm long and 4 1mm diameter, the smaller cylindrical section is 22 mm long and of a diameter to be a neat fit into one end of the steel pipe to which it is butted and welded. It is the heavier of the two weights.

The weight through which the earth stake passes is of a similar construction to the blind weight; the exposed cylindrical section is 21 mm long and 33 mm diameter, the smaller concentric cylindrical section is 25 mm long and of a diameter to be a neat fit into the other end of the steel pipe to which it is welded. In addition it has a hole, just larger than the earth stake, bored through its centre, in the prototype the earth stake is 12 mm diameter, the bored hole is 12.2 mm diameter. Each end of the bored hole has a chamfer to facilitate easy movement of the earth stake. The clearance between the earth stake and the hole in the weight is deliberately kept small to keep the movement of the sliding weight parallel to the earth stake and also to preclude the entry of foreign matter which could jam the sliding weight on the earth stake.

Check the fit of the blind weight to one end of the handle and make sure it is concentric with the handle. Weld the blind weight to the handle. Insert the earth stake and end stop into the handle and then slide the remaining weight over the earth stake and into the handle. Check that the earth stake and end stop can move easily up and down inside the handle without binding and then weld the remaining weight to the handle. Recheck that the earth stake and end stop still move easily up and down inside the handle.

In case you are wondering why the two end stops are not the same, the blind weight is larger as it is the one that acts on the end stop to drive the earth stake into the ground and more force is required to do this as there is no hole installed in the ground for the earth stake. The weight through which the earth stake passes is smaller as it is only used to remove the earth stake from the hole in the ground.

The Earth clamp

The earth clamp is made from a piece of beryllium copper because some was to hand. Brass or hard copper will do as well, but not steel, as it rusts, or aluminium, because it reacts with copper in the presence of moisture, like rain. The prototype is 50 mm long and 28 mm diameter and has a hole just larger than the earth stake bored through it to allow the earth stake to easily slide through it.

This hole is offset from the centre of the clamp so that one side of the clamp is thick enough to accept tapped holes for the butterfly headed screw which holds the clamp on the earth stake and the threaded stud to which the earth lead is attached with a butterfly nut. Boring this offset hole is most easily achieved using a lathe fitted with a chuck that has independent jaws.

The earth clamp has a flat milled on one side, parallel to the hole for the earth stake, for approximately half its' length, refer to the photos. In the prototype this flat is approximately 12 mm wide but it only needs to be wide enough to accommodate any wiring you plan to attach to the earth stud, which is centred on the flat. The purpose of the flat is to improve the contact area the earth clamp presents to any wiring attached to the threaded stud.

In the prototype the axis of the threaded holes for the butterfly head screw and the threaded stud are offset 45 degrees from each other, relative to the line of the hole for the earth stake, so that the earth lead, or any wiring, attached to the threaded stud will not interfere with the butterfly head screw when it is tightened or released. A blind hole, centred on the flat, is drilled and tapped to suit the thread of the threaded stud. In the prototype the centre of the blind hole is approximately 13 mm from the end of the clamp, the hole is drilled and tapped for a 6 mm thread.

A hole is drilled through the side of the earth clamp and into the hole through which the earth stake passes, so that the end of the butterfly head screw will press against the side of the earth stake when it is tightened. In the prototype the centre of this hole is 13 mm from the other end of the clamp, so the hole for the threaded stud and the hole for the butterfly head screw are approximately 24 mm apart; if the earth clamp is 50 mm long, the hole is drilled and tapped for a 10 mm thread.

The threaded stud is a screw, 6 mm thread, approximately 30 mm long, from which the head has been removed, and the cut end squared off, so that it can be screwed into the blind hole in the earth clamp. A section of thread is removed from the exposed end of the threaded stud to make starting the butterfly nut on the thread easier. In the prototype the amount of thread removed was the same as the depth of the butterfly nut and the length of the exposed thread is approximately 24 mm. Two nuts, screwed onto the threaded stud and tightened against each other, provide the method by which the threaded stud is tightened into the blind hole. A small amount of thread locker is introduced into the blind hole before the threaded stud is inserted and tightened, this will help hold the threaded stud in the clamp.

The butterfly head screw is made from a bolt, 10 mm thread, approximately 30 mm long, to which a custom butterfly head has been attached so that it can be tightened without using an easily misplaced tool. Before attaching the butterfly head the end of the screw is faced so that it is square to the thread and then chamfered so that there is no sharp edge to cut into the copper cladding of the earth stake. This is most easily done in a lathe. In use the threads of both the butterfly head screw and the threaded stud have a light coating of Vaseline™ to retard corrosion.

Use

The slide hammer earth stake is very easy to use, but having tested both the original and a second prototype I offer the following comments -

- Disconnect all wiring from the earth clamp when inserting and removing the earth stake. This keeps the wiring out of the way.

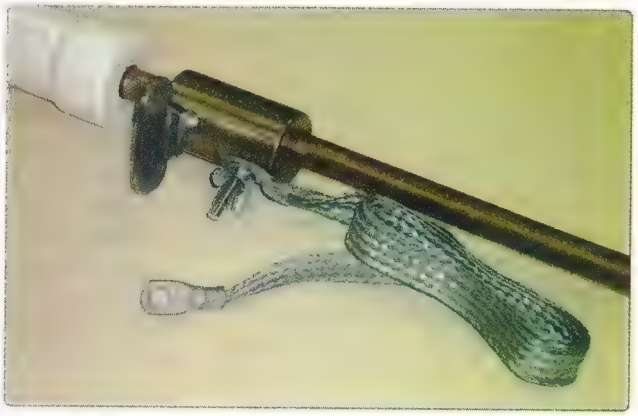


Photo 2: The prototype slide hammer with attached earth lead.

Photo 3: The prototype slide hammer earth lead attachment – close up.

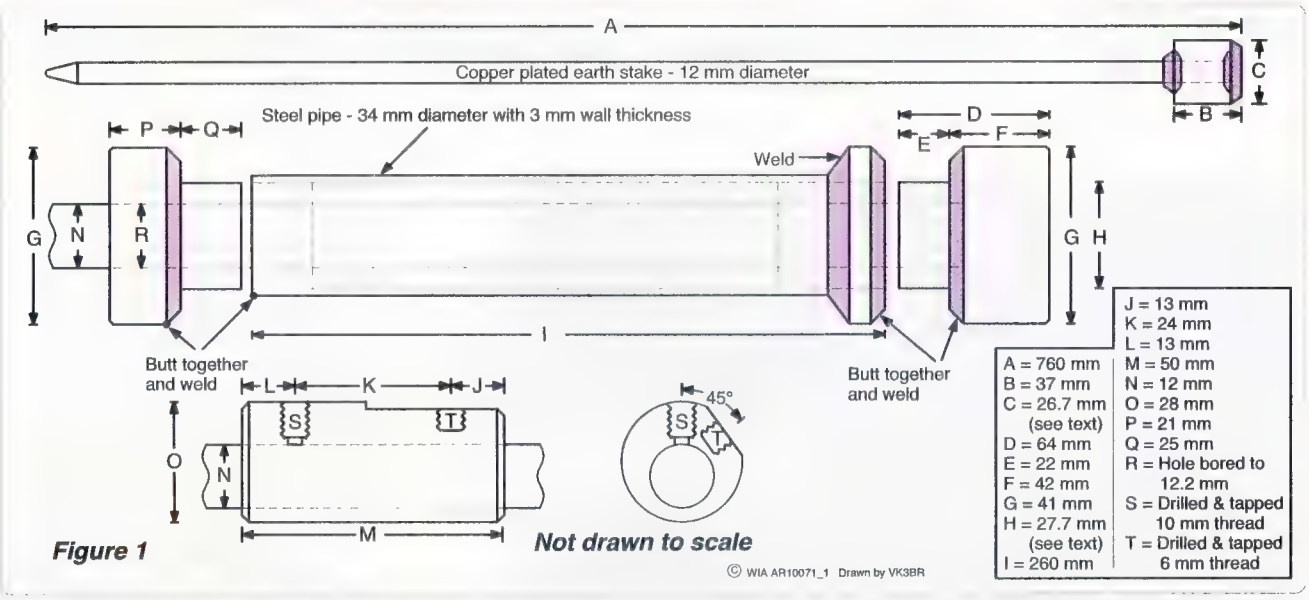


Figure 1

Figure 1: The prototype slide hammer earth stake master plan.

- Release the butterfly head screw on the earth clamp so that the earth clamp can slide freely on the earth stake. This keeps the impact shock of the end stop hitting either cylindrical weight from reaching the clamp and also means there's no way you can jam your fingers between the earth clamp and the lower cylindrical weight of the handle.

The plans

Refer to Figure 1 for my set of plans for the finished article. These are not critical, as your dimensions may vary considerably. But, a good set of plans, so that you know what you expect when you finish, is recommended.

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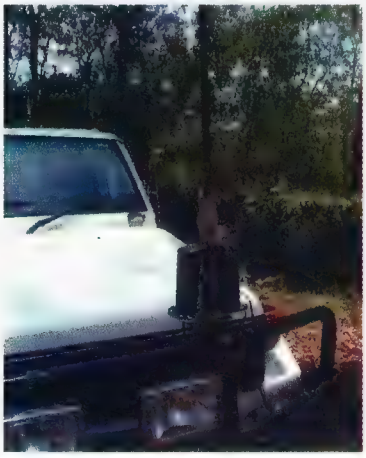

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VK3news Geelong Amateur Radio Club - The GARC

Tony Collis VK3JGC

Photo 1: The VK3ALB/P field day set up with rain protected dishes.

Spring Field Day

The VK3ALB/P field day team participated in the 2011 Spring VHF/UHF Field Day weekend. Operators were Lou VK3ALB, Jenni VK3FJEN, Michael VK3FMIC, Peter VK3APW and Nik VK3BA. They operated from the Point Henry Signal Station near the Alcoa plant at Geelong, in grid locator QF21FU. The team worked on all bands from six metres through to 10 GHz.

Despite the poor weather and small number of stations available, they operated there for 24 hours. Station access was courtesy of Alcoa and Jim Friend VK3VB. Significant distances were worked on two metres, 275 km to Wangaratta, on 70 cm, 275 km to Wangaratta and on 23 cm, 398 km to Wagga. All other contacts were within 100 km on all bands.

The Lara UHF and Microwave Experimenters Group (LUMEG) also participated in the Field Day for the duration. The operators here were Chas VK3PY and David VK3QM along with Charlie VK3NX, who could only stay for a short time on Saturday due to other commitments. As usual the LUMEG team operated out of 'Bayview' in the Barrabool hills, QF21CU, 12 km west of Geelong, where the weather conditions were also poor.

The operational footprint of VK3RGC

Bert VK3TU gave a highly informative presentation on the use of 'Radio Mobile', a freeware program written by Roger Coudé VE2DBE, in Canada (*http://www.cplus.org/rmw/english1.html*) The Geelong Amateur Radio Club operates five repeaters in all, VK3RGL on 147.00 MHz, VK3RGL on 439.575 MHz, VK3ROW on 147.275 MHz, VK3RGC on 147.125 MHz and VK3RNP on 438.125 MHz D-STAR. In addition the club also supports two beacons, at VK3RGL on 144.530 MHz and VK3RGL on 432.530 MHz.

The two metre repeater VK3RGC, 147.125 out and 147.725 in, is newly re-built and operating from Montpellior, a 115 metre high reservoir site overlooking Geelong city. Access to the repeater requires a CTCSS tone at 91.5 Hz; an IRLP node (6572) is available at this repeater. The revised coverage map uses rectangular dimensions, rather than the polar versions used previously. The expected signal strengths are for a mobile antenna about 1.5 metre above ground; if operating from a home station with a higher antenna, then the signal will be stronger.

The inner blue area is for greater than 20 mV signal strength, then the green is for 2 to 20 mV, and the red is for 0.2 to 2.0 mV. These are 20 dB steps, and actual measurements suggest that the accuracy is quite good. See how the high spots, such as the You Yangs, cast shadows shown as a white area. For further information regarding the status of the repeaters maintained by the GARC, please go to *www.vk3atl.org*

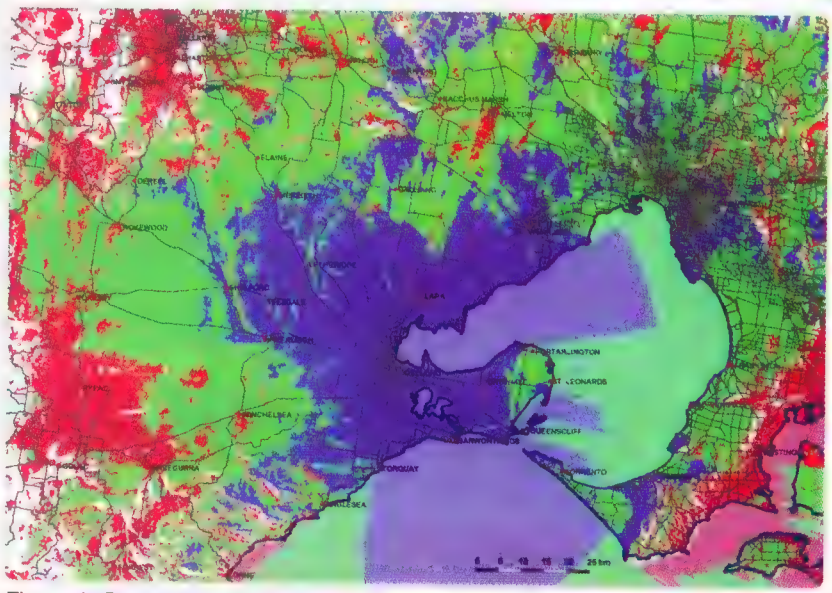

Figure 1: Graphic display of the signal reception expected from the revamped VK3RGC repeater.

VK6news Hills Amateur Radio Group (HARG)

Bill Rose VK6WJ, Publicity Officer - HARG

Hello from HARG with a quick summary of the last four months of 2012.

We have now presented two of our monthly Technical Talks. 'Software Defined Radio' was presented by Richard VK6BMW in September and 'Data Modes' by Steve VK6ST with assistance from Heath VK6TWO in October. Also in October we operated JOTA for the Guides with whom we share our clubrooms and next year we hope to repeat this with the addition of a simple electronic construction project or a fox hunt.

Our inaugural 'Show and Tell Day' was held at the November meeting. Six members showed their favourite bits and pieces including an ESR Meter, recently built by Bill VK6WJ, a vertical HF antenna system made by Onno VK6FLAB and a home brewed portable Slim Jim and 5/8 wave 2 m mobile antenna from Alan VK6PWD. Richard VK6BMW showed his 60 year old 1000 watt Navy power meter, Meg VK6LUX demonstrated her hand held satellite antenna and Ronald VK6FRSK showed his four-element two metre Quad made from copper wire threaded through poly pipe – not the most beautiful thing in the world but very quick and easy to build.

Ronald VK6FRSK with his two metre Quad at the Show and Tell Day.

In December we organised a HARG table at the TET-Emtron Open Day and received several applications from prospective new members. Our final meeting for the year was our Christmas Barbecue on Saturday, 10 December. We started off with hot dogs at lunch time then played with a satellite dish and receiver during the afternoon and finished off with delicious fish and chips in the evening. I think we must have the most versatile barbecue in WA – and it seems to stay really clean!

This year we will continue with our monthly technical talks and I will announce the topics in the VK6 News section of the weekly WIA broadcasts.

73 and best wishes for 2012.

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Foundation Corner 18:

A simple two metre half wave dipole with gamma match

Ross Pittard VK3CE
vk3ce@amateurradio.com.au

Photo 1: Completed antenna ready for tuning.

Sometimes when we are mounting antennas it is handy to side mount one on a tower instead of mounting on the top. This has the advantage of giving directivity and thus a little gain in the direction we want. It is common practice on VHF repeaters where a number of dipoles may be stacked either vertically on one side of the tower or arrayed around the tower structure.

If the home QTH is a considerable distance from the local repeater, side mounting an antenna can give you gain in the direction of the repeater while still providing useful local performance. The radiating pattern will depend upon how close to the tower structure the antenna is mounted, altering the omnidirectional pattern of the dipole.

If the spacing is ¼ wavelength (50 cm) or less from the tower, the tower will act as a reflector and the antenna will have some directivity. If the spacing is greater than a ¼ wavelength the antenna will act as an omnidirectional, with the tower having minimal effect.

There are a number of ways to correctly match a feed line to your antenna, depending on the feed line impedance and the type of antenna you are building; examples of different matching systems can be seen in the ARRL Handbook, Chapter 19-13 (Reference 1) or try page 275 in the Radio Theory Handbook (Reference 2). For those of you who do not have access to the Handbooks, another excellent reference freely available on the internet is the US Marine Corps Antenna Handbook (Reference 4).

The type of feed I have employed in this design is called a 'gamma' match. Because the voltage at the centre of a half wave dipole is zero, the shield of our coax can be connected to the arm or centre point of the dipole. Any inductance is tuned out by the capacitor at the matching point. As can been seen from the photos, the capacitor has been made from the inner of a piece of coax sliding inside an aluminium tube which doubles as the gamma arm. Adjustment of the rod length and the size of the capacitor enables a very low SWR to be obtained at resonance. I mounted a connector on the boom but this can be omitted and the coax connected directly to the antenna. Simple and robust to construct it makes an ideal home brew project.

For the boom I used a piece of 25 mm round aluminium tube from a discarded TV antenna I had lying around, about one metre long. The length will depend on the size of your tower and mounting distance you choose. If purchasing new, 25 mm aluminium square tube will be ideal for the boom.

At frequencies in the VHF range and higher, the diameter of the dipole element can be a significant proportion of the length of the element. This needs to be taken into account when calculating dipole lengths for VHF and UHF. Because of this phenomenon the standard formula is not suitable and the alternative I used (Reference 3) for a half wave dipole is:

$$\frac{5600 \times 2.54}{F\ (MHz)} = \text{Half wave dipole length in cm}$$

I used 147 MHz as the centre frequency (the middle of the repeater segment) and thus the calculated length for my half wave dipole was 96.7 cm (I rounded it to 96.5 cm).

I again used some scrap aluminium for the gamma arm and the inner of a piece of RG8/RG213 coax (approximately 165 mm long) fitted nicely inside the tube to

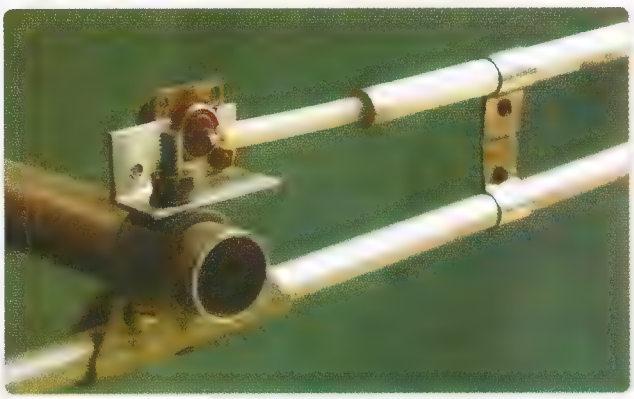

Photo 2: Close up showing gamma arm (note the tuning bolts have not yet been replaced with rivets).

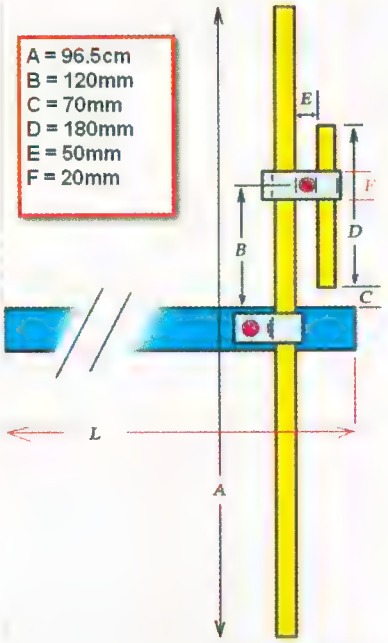

Figure 1: Basic dimensions of the antenna.

form the capacitor. It is always preferable to use seamless tube not the cheaper rolled aluminium often found in newer TV antennas. I found a gamma arm of approx 180 mm in length spaced 50 mm from the element tuned nicely. There are many theories regarding design of gamma arms but this set-up is simple and easy to replicate. The gamma arm is attached to the driven element by a small piece of scrap flat aluminium rolled around each tube and held while tuning with a couple of nuts and bolts, see Photo 2. When the best match is obtained apply some aluminium jointing compound and replace the nuts and bolts with aluminium pop rivets. Another method is to drill a hole in the gamma arm and element and use a long bolt with a spacer cut to around 50 mm.

Start with the spacings as per Figure 1 and if necessary adjust the sliding gamma arm and attachment point to the driven element for best match. The prototype, see Photo 1, ended up with a SWR of 1.3 to 1. If the antenna is to be vertically mounted, I would put the gamma arm on the top side and the end of the arm can be sealed with silicon, or use a plastic end cap from the local hardware store.

Once the tuning is completed, apply a generous coating of silicon to the coax connector and seal the gamma arm and all is done. Simple to construct with basic hand tools, this is the ideal antenna for the amateur on a budget.

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4. USMC Antenna Handbook available from: *http://www.armymars.net/ArmyMARS/Antennas/Resources/usmc-antenna-hb.pdf*

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The 'Dibble' digital mode interface box, with an introduction to PSK31

Ross Fraser VK2WN

Photo 1: The Completed 'Dibble'.

This article is intended to be an introduction to the most popular digital amateur mode, that is, PSK31. There are references listed at the end of this article that will give you an idea about how PSK31 works, the operating frequencies and so on. These articles can be referred to if you want to delve deeper into the subject and gain a greater understanding of PSK31. My intention however in this present article is to introduce you to this exciting mode, present an interface box for you to build and, to hopefully encourage you to try out PSK31 for yourself.

The 'Dibble' is a digital mode interface box that has been designed to be used with most, if not all, of the presently available digital ham modes including PSK31 and even RTTY. My main aim, however, in creating the 'Dibble' is for it to be used with PSK31. The software I use is called Digipan 2.0 and it is easy to use and obtain. There are many sites on the web where you can download Digipan 2.0 (for example, go to *http://www.digipan.net/* and follow the prompts). Within the Digipan program are some excellent help menus if you want more information about setting up for PSK31. There are also numerous articles on the internet written about PSK31 which also use Digipan. Do a Google search for 'psk31 digipan'. There are also some excellent PSK31 videos on YouTube by K7AGE. Search on the YouTube site for 'psk31 k7age'. It is important to realize, also, that there are other 'free' PSK31 programs available. Programs such as Fldigi (*http://www.w1hkj.com/*) and Multipsk (*http://f6cte.free.fr/index_anglais.htm*) and Ham Radio Deluxe (*http://www.ham-radio-deluxe.com/*) can all be used with PSK31, so after experimenting with Digipan and PSK31 you may want to investigate these more powerful digital mode programs.

An interface box is simply connected between the computer and the ham radio – refer to Figure 1. The interface box allows digital signals to be encoded (from the computer) and decoded (from the radio). PSK31 is not unlike Morse code except that the computer does all the hard work for you (encoding and decoding) and at speeds of around 50 words-per-minute. Peter Martinez G3PLX, the amateur who, although he did not invent PSK31 but was instrumental in promoting its use, emphasized the fact that PSK31 was designed for keyboard to keyboard communication over HF amateur radio (Reference 2).

If you just want to listen to PSK31 to get a feel for it and to see what it is like then you can do this quite simply without going to the trouble of building the 'Dibble' – refer Figure 2. Firstly you need to need to know what PSK31 sounds like. Make sure the volume on your sound card is turned up and then go to the following website *http://en.wikipedia.org/wiki/PSK31* and locate and click on 'a sample PSK31 transmission'. PSK31 has a nice warbling or chirping sound to it. So now you know what a PSK31 signal sounds like!

If you simply want to monitor PSK31 signals then you will need a cable that connects the radio's speaker output (where you would normally connect an external speaker) to the computer soundcard's line-in socket. Alternatively you could connect to the headphone socket on the front of the rig instead of the radio's speaker output.

The 3.5 mm stereo plug to 3.5 mm stereo plug should be as short as possible. One end plugs into the speaker out socket on the back of your radio whilst the other end plugs into the line in or microphone socket on your computer. For desktop computers connect to the line in

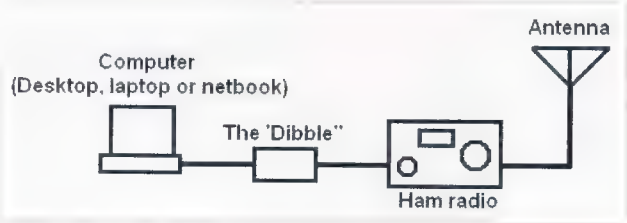

Figure 1: Connecting the computer to the radio.

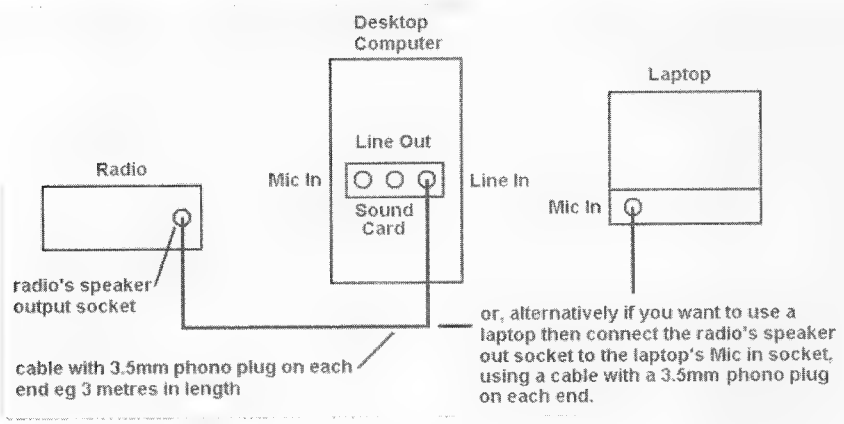
Desktop Computer
Laptop
Line Out
Radio
Mic In
Line In
Mic In
Sound Card
radio's speaker output socket
or, alternatively if you want to use a laptop then connect the radio's speaker out socket to the laptop's Mic in socket, using a cable with a 3.5mm phono plug on each end.
cable with 3.5mm phono plug on each end eg 3 metres in length

Figure 2: A simple method for receiving PSK31.

socket using a 3.5 mm stereo plug and for laptops use microphone in, again, with a 3.5 mm stereo plug.

At my location, in the central west of NSW, 20 metres 'opens up' early afternoon and stays open until about 9 pm. The 20 metre PSK31 frequency that I monitor is 14.070.15 MHz but PSK31 signals can be heard from 14.070 MHz to 14.072 MHz. Be warned though, once you start decoding PSK31 signals you may become hooked! At the author's location at about 5 pm (local time) I can quite frequently hear stations from Japan, Russia, North America and New Zealand. These stations are not always 'booming' in but the copy is frequently about 85 to 90 percent, enough to get most of the information that the other station is sending.

Construction

I built the prototype as a paddyboard and this layout is shown in Figure 3. Refer, also, to the schematic diagram in Figure 4. I made a fully enclosed box, for screening purposes, out of double-sided PCB to house the paddyboard. Refer Photo 2.

This was then fitted into a plastic instrument case, refer Photo 3. My suggestion when making the cables, for example, from the radio speaker out or where-ever is to buy a ready-made cable 1.5 metres long with 3.5 mm plugs on each end. Cut one plug off one end at the desired length and strip and solder to the paddyboard as per Figure 3. The same method applies to the Cat 5e patch lead. You will also need to purchase a serial cable that connects your computer's serial port to the 'Dibble'.

Please note: Figure 3 shows the microphone connections for an Icom IC-706IIG. If you want to build the 'Dibble' for a different rig you will have to adapt the microphone connections accordingly. Everything else about the 'Dibble' should remain the same.

What happens if you are using a laptop instead of a desktop computer and want to transmit and receive using the 'Dibble'? Laptops do not have serial ports like desktop computers do, so you will have to

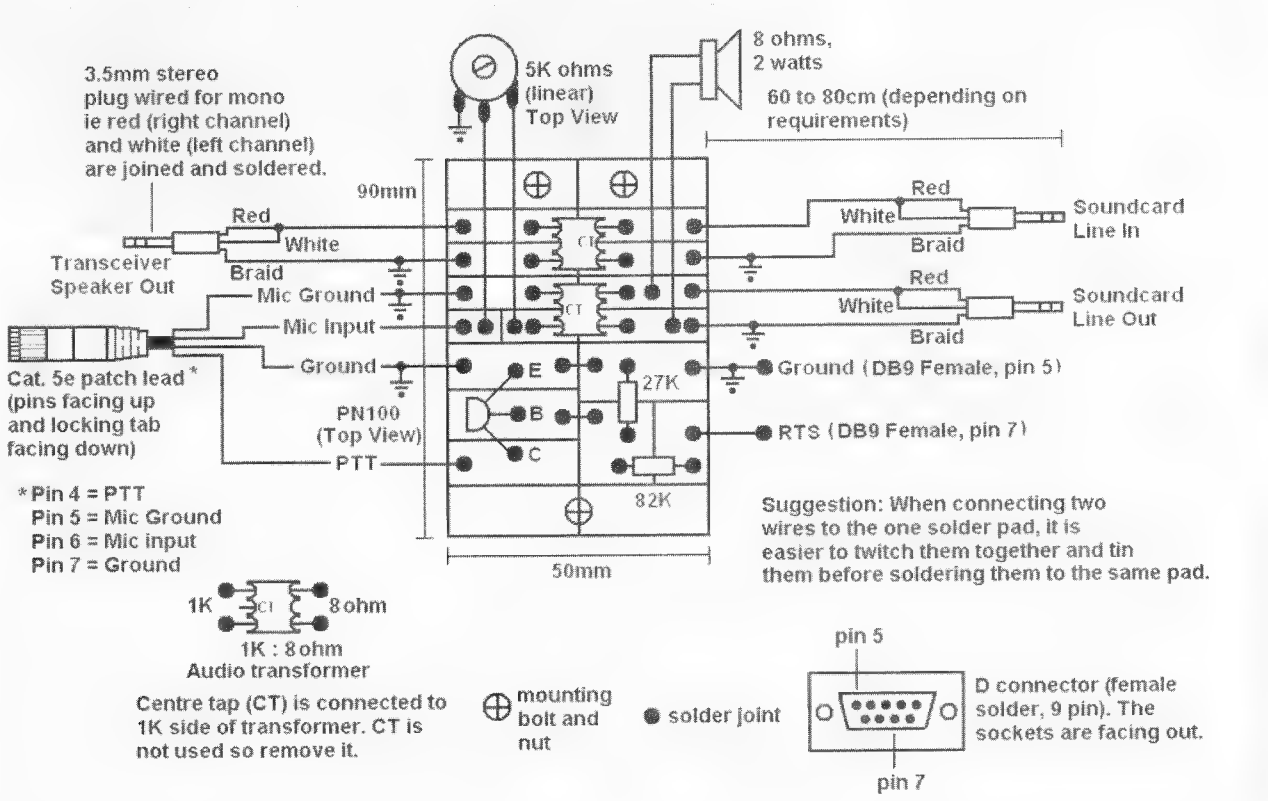
3.5mm stereo plug wired for mono ie red (right channel) and white (left channel) are joined and soldered.
5K ohms (linear) Top View
8 ohms, 2 watts
60 to 80cm (depending on requirements)
90mm
Red
White
Braid
Transceiver Speaker Out
Mic Ground
Mic Input
Ground
Cat. 5e patch lead * (pins facing up and locking tab facing down)
PN100 (Top View)
PTT
E
B
C
27K
82K
Red
White
Braid
Soundcard Line In
Red
White
Braid
Soundcard Line Out
Ground (DB9 Female, pin 5)
RTS (DB9 Female, pin 7)
50mm
*Pin 4 = PTT
Pin 5 = Mic Ground
Pin 6 = Mic input
Pin 7 = Ground
Suggestion: When connecting two wires to the one solder pad, it is easier to twitch them together and tin them before soldering them to the same pad.
1K
8 ohm
1K : 8 ohm Audio transformer
Centre tap (CT) is connected to 1K side of transformer. CT is not used so remove it.
mounting bolt and nut
solder joint
pin 5
pin 7
D connector (female solder, 9 pin). The sockets are facing out.

Figure 3: The paddyboard layout for the 'Dibble'.

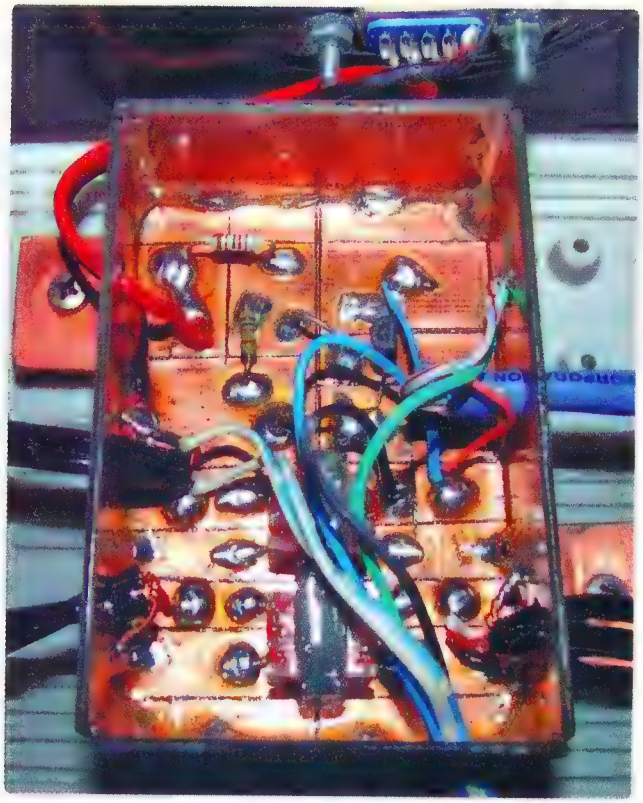

Photo 2: The 'Dibble' paddyboard, with top cover removed for clarity.

use the modern equivalent which is a USB to serial port adapter. The one I use is from Jaycar, Catalog # XC4834, about $40. The USB to serial port adapter allows the USB port to act like a serial port giving effectively the same functionality.

You need to go to your sound card's volume control and adjust volume control and wave to about the half-way point. You then adjust the volume (also known as the AF or audio frequency) control of your rig to set the audio level of the waterfall about right. If the waterfall is black then that indicates no signal (volume control on rig is fully anti-clockwise). If the waterfall is all yellow then you have too much signal and you need to reduce the radio's volume. If the waterfall is mainly blue with yellow speckles then that is a good place to start. Listen for a clear warbling tone and you should see the 'tram tracks' of a distinct PSK31 signal. Interestingly, you may hear PSK31 signals and they show up on the Digipan display but they don't display as a signal on your rig!

Final Notes

The pot on the front of the 'Dibble' is for setting the modulation level (microphone input) of the PSK31 signal. Adjust the level until the output waveform distorts and then reduce the amplitude below the level of distortion. Put a mark on the white circle behind the knob that corresponds with this setting and also put a mark that corresponds to the fully counter-clockwise position, as a reference. The parts list makes reference to Wet/Dry P800 abrasive paper. This is used, with water, to clean and polish the blank fibreglass PCB after it has been cut ready to load with parts. After you have the 'Dibble' working and, before you solder the top cover on, it would be a good idea to give the paddyboard a light spraying with Servisol, a PCB lacquer, to protect it.

Peaking modulation level:

1. Set mode on rig to USB.
2. From within Digipan 2.0 click on the CQ button.
3. Adjust modulation pot, on the front of the 'Dibble', for a peak (but no further) on the power meter.
4. Repeat step 3 to ensure that power out is peaked but not beyond the peak.

The peaked setting sets the modulation level at maximum but without distortion.

Thanks very much to Waldis VK1WJ for his assistance in the preparation of this article.

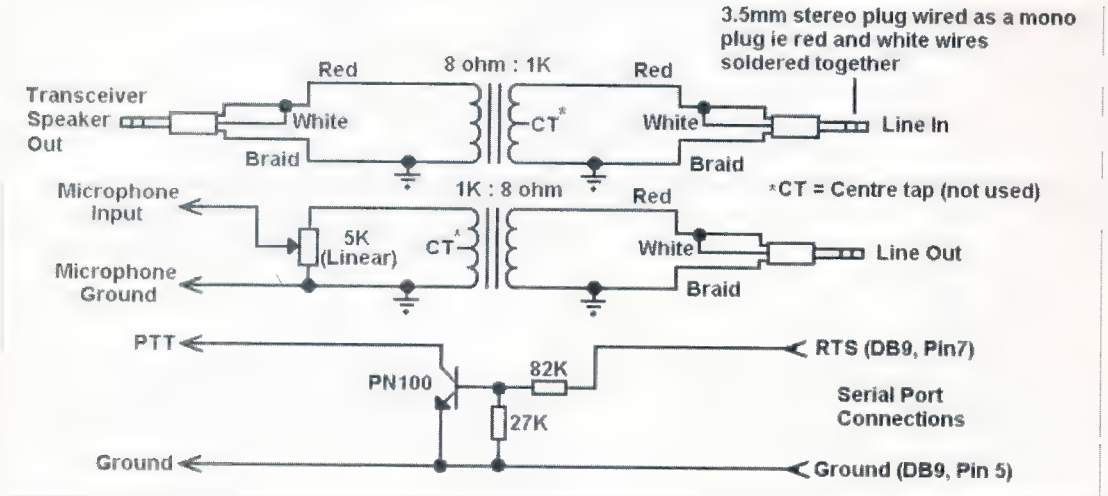

Figure 4: Schematic diagram of the 'Dibble'.

Parts List:*

* All catalog numbers in brackets are from Jaycar's 2010 catalog unless stated otherwise.

Sufficient double sided blank fibreglass PCB to make a box 90 mm long x 50 mm wide x 30 mm high, excluding the base. (Jaycar Catalog #: HP-9515).

1 x single sided blank fibreglass PCB measuring 90 mm by 50 mm, cut as per Figure 2 for the base of the box. (Jaycar Catalog #: HP-9514)

1 x 27 K, ½ watt, 1%, metal film resistor. (Jaycar Catalog #: RR-0606).

1 x 82 K, ½ watt, 1%, metal film resistor. (Jaycar Catalog #: RR-0618).

1 x PN100 multi-replacement common transistor. (Jaycar Catalog #: ZT-2283).

2 x miniature output transformers, 1 K to 8 ohms. (Jaycar Catalog #: MM-2532).

1 x 2 metre Cat 5e Patch Lead, blue. (Jaycar Catalog #: YN-8202).

3 x 3.5 mm to 3.5 mm stereo plugs, 1.5 metre. (Jaycar Catalog #: WA-7008).

1 x D connector, female solder, 9 pin. (Jaycar Catalog #: PS-0804).

1 x 5 K linear (B) pot. (Jaycar Catalog #: RP-7508).

Knob to suit 5 K Linear (B) pot. (Jaycar Catalog #:HK-7762)

Add the following if necessary: Hook-up wire; instrument case (200 mm wide x 155 mm deep x 65 mm high, from Altronics, Catalog # H0480F); wet/dry (P800) waterproof abrasive paper, blue; Servisol protective circuit board lacquer (in a spray can).

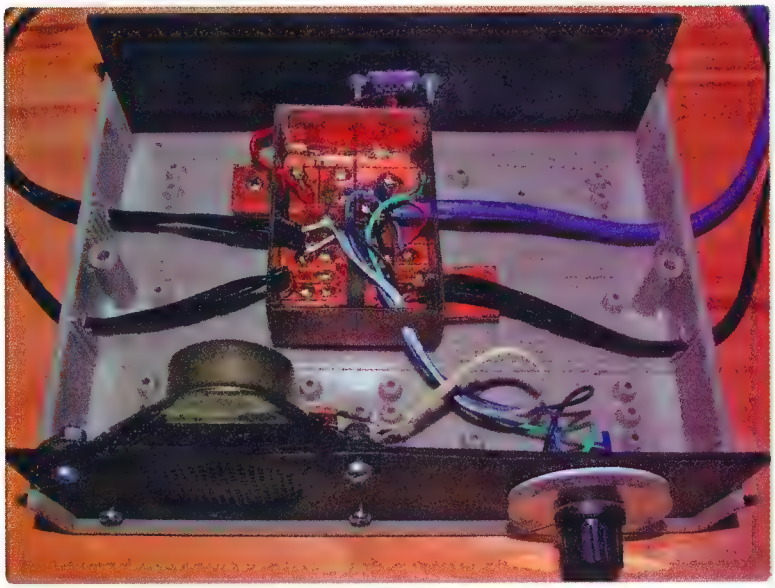

Photo 3: A suggested layout for the 'Dibble', with the covers removed for clarity.

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2. PSK31: A new radio-teletype mode with a traditional philosophy, by Peter Martinez G3PLX, parts 1 and 2): *http://det.bi.ehu.es/~jtpjatae/pdf/p31g3plx.pdf*
3. The New Digital Modes in Amateur Radio. Located on the website of Waldis Jirgens VK1WJ. *http://ilgonis.orgfree.com/digiar.htm*
4. PSK31 – The Easy Way, Part 1, by Alan J Gibbs VK6PG. *http://users.tpg.com.au/users/vk6pg/PSK311.pdf*
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7. The 'Official' Home Page of PSK31 *http://aintel.bi.ehu.es/psk31.html*

Over to you

You thought broadband over power lines was dead and buried ..... Wrong!

We thought that broadband internet working over power lines was well and truly dead. How wrong we were. I received a copy of an article in ***Computer Choice*** for September/October 2011 with the heading of ***Get to the Point***. The story talks about broadband over power lines or more specifically your home 240 volt mains wiring.

The system consists of two or more interfaces between various computers and ancillary devices which are plugged into the power points in the home. This is instead of wired Ethernet and wireless networking (Wi-Fi).

I don't know if I have any of these around my area but I do wonder how much radiation there will be on the high frequency and lower VHF amateur bands. It is unlikely that the equipment that is able to be purchased for between $100 and around $170 meets any Electro Magnetic Compatibility (EMC) or Electro Magnetic Emission (EME) standards as after all the radiation is contained within the electrical wiring? If the electrical wiring of your home was configured like Cat 5 and similar cable is, there should be little if any radiation of consequence to interfere with our radio equipment. However, electrical wiring isn't like this and the wires may be spaced by some distance which will mean that the wiring will radiate. This will mean that radiation from a neighbour's BPL system could radiate into your home at a significant level. If the BPL info is being radiated conversely it will be susceptible to our transmissions. Guess who will get blamed!

This is not a how to fix it article but a warning, and I suggest that members do some research on this and email the WIA and the ACMA alerting them to the article and the possible ramifications. If you are a member of Australian Consumers' Association, the publisher of the article, contact them and suggest that they test all such devices for radiation to AM domestic radios and amateur high frequency radios in a typical domestic situation. If you don't fight to have this looked at, we will all be the worse off. You the reader cannot rely on the elusive "they" to do all the work.

Rodney Champness VK3UG

Ten tips for ten watts – by someone who does it with two

Peter Parker VK3YE

Introduction

Here are some hints and tips for those who use ten watts, either due to equipment capability, battery capacity, licence level or personal choice. While you will not be working overseas as frequently as those with higher power and better antennas, ten watts is still a load of fun. Follow these ten tips for results that will amaze.

Tip 1: Understand the power of ten watts

Ten watts doesn't sound much. After all it is ninety watts less than what the standard hundred watt radio puts out, so one might think it only went a tenth the distance. It actually works out much better than that and international contacts are sometimes possible. Above a certain minimum required to overcome path loss, what is most important to intelligibility is the strength of the signal relative to noise on the band.

How does ten watts sound at the other end? The best HF rigs have calibrated S-meters where each S-unit represents a change of six decibels, or a power ratio of four. So a 100 watt signal indicating S9 on a receiver should fall to S8 with 25 watts and roughly S7 with ten watts. Modern rigs have automatic gain controls that bring up weaker signals. AGC makes ten watt signals sound almost as loud as 100 watt signals if band noise is low, with only a bit more background noise and fading. The rules change when noise or interference is present. Supposing noise is running at strength six or seven. The 100-watt station averages strength nine so is still plainly audible, even if their signal occasionally fades.

Here the ten watt operator has a tougher time. Their signal is buried in the noise so is difficult to copy. Even worse is that fading may cut the signal to a five, making only part copiable.

When the signal is level with the noise, even a doubling of power (3 dB increase - barely noticeable otherwise) lifts it from being equal to being twice as strong, and thus copiable. All this means is that ten watt operators have less reserve power than their 100 watt colleagues when noise appears. Also, 100 watt stations can get away with an inefficient antenna system that loses 3, 6 or even 10 decibels and still make good contacts. Whereas these losses applied to a ten watt station would make their signal borderline or unworkable more of the time.

Figure 1 below explains. At low power a small boost greatly raises the number of people who can hear you. The difference between one and ten watts is particularly marked. But once a certain threshold has been passed (in this case 10 or 20 watts) the benefits taper off. That is unless you now aim for 3,000, 5,000 or 15,000 km contacts, when a higher threshold makes more power worthwhile again.

The message is clear. An efficiently radiated ten watts can bring many successful contacts. But every decibel counts at the lower power levels. The rest of the article deals with how to recover what you lack in output power through understanding band capabilities, antenna losses, transmit audio quality and sharper operating.

Tip 2: Understand what the various bands can do

Ten watts can be heard worldwide on any band between 1.8 and 50 MHz given the right conditions. However there is a very small chance of DX success if you were to call on random bands at random times. Learning what the various bands do at different times of the day stack the odds in your favour. The table next page shows approximate everyday capabilities of Foundation licensee bands, noting seasonal and other variations exist.

The activity column is based on the likelihood of hearing something

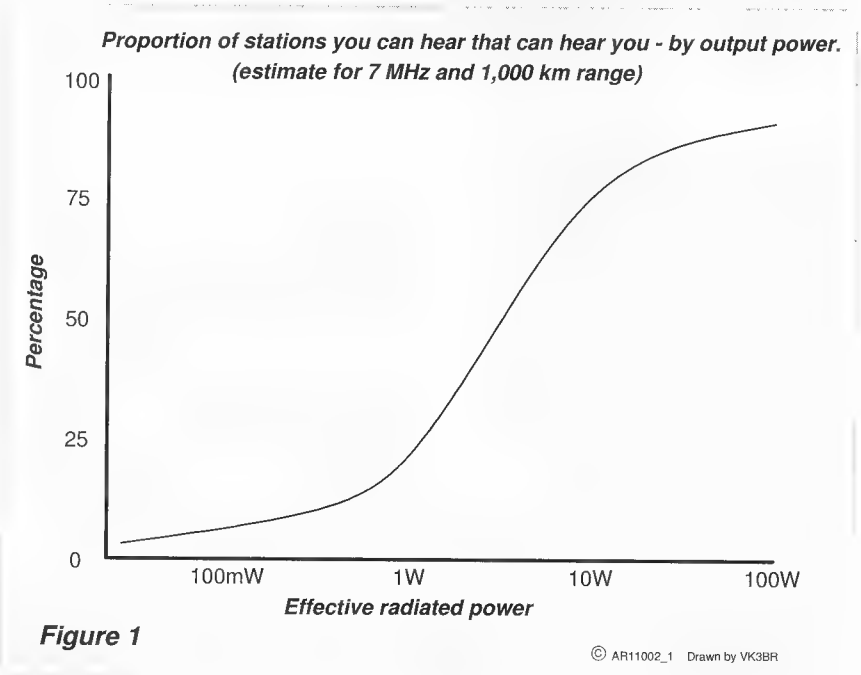

Figure 1: Graph showing proportion of stations who can hear you – by transmitter power.

Band	Activity	Range	Notes
80 m daytime	Low	Up to 200 km	Better in winter months.
80 m evening	High	Up to 600 km	Usually no skip zone – that is, blanket coverage out to specified distance. Lightning static reduces range in summer months. DX possible with good conditions but much harder than 40 m.
40 m daytime	High	300 to 1000 km	Seasonal and sunspot cycle variations – daytime range tends to be higher during winter and solar minimum years. Skip zone can mean that some intermediate distances, for example, 50 to 300 km, are not always well covered.
40 m evening	High	Up to 3000 km	Local and next-state contacts harder in low sunspot years and winter evenings. DX possible with good conditions. Skip zone is longer than during the day.
15 m daytime	Low-moderate	Up to 50 km	Very dependent on solar cycle. Interstate and DX contacts possible with 10 watts in high solar cycle years. Skip zone means that intermediate distances, for example, 50 to 500 km, are not well covered even when propagation is available from elsewhere.
15 m evening	Low	Up to 50 km	Most active during the day but there can sometimes be evening DX openings.
10 m daytime	Low-moderate	Up to 50 km	Very dependent on solar cycle. Interstate and DX contacts possible with 10 watts in high solar cycle years. Sporadic-E provides strong interstate contacts around December/ January, with 500 to 1500 km typical. Skip zone means that intermediate distances, for example, 50 to 500 km) are not very well covered even when propagation is available from elsewhere.
10 m evening	Low	Up to 50 km	Most active during the day but there can sometimes be evening DX openings.
2 m	Moderate to high in urban areas	Up to 50 km	Range can be 200 km or more with SSB or use of FM repeaters. Summer tropospheric enhancement can increase distances to 500 km or more. Check for inversions and study weather charts. Sporadic-E propagation allows occasional interstate contacts – especially in mid-summer.
70 cm	Low	Up to 30 km	Range can be 100 km or more with SSB or use of FM repeaters. Summer tropospheric enhancement can increase distances to 500 km or more. Check for inversions and study weather charts.

if randomly tuning around. But when conditions are right activity can be high even on normally quiet bands.

Band activity varies around the nation. During the day 40 metres is more active in the densely populated south-east than the north or west. Conversely higher frequency bands such as 15 and 10 metres open more often nearer the equator. VHF/UHF is even more regionally based, and especially on SSB you need to be aware of nets and activity periods otherwise there is a high chance of turning on and hearing nothing. The ranges given are conservative and are frequently exceeded. They are estimates based on ten watts to simple antennas. They also assume low solar activity, which when high transforms 15 and 10 metres into busy bands with worldwide coverage.

For the Foundation licensee 40 followed by 80 metres are the HF bands that will provide the most number of good quality contacts with ten watts. However 15 and 10 metres should not be ignored for their long-distance potential, particularly as sunspots rise in the next few years.

Tip 3: Cut RF losses with an efficient antenna and feedline

Figure 1 above showed that on bands like 40 metres one could cut power from 100 to 25 watts and most people within 1000 km would still hear you. A 100 watt station can throw away most of their power in an inefficient antenna but still be heard and not even know anything was amiss. Low power stations have no such luck because every decibel counts. Inefficiencies that 100 watt stations get away with can be why others do not hear your ten watts. There is no room here to discuss all aspects of antennas, feedlines and matching. However I will list some common short-cuts that low power stations should avoid to minimise losses.

a. Tuning coax fed dipoles on other bands with an antenna coupler in the shack. A dipole fed with coax is basically a monoband antenna, with odd harmonics being the exception (for example, a 7 MHz dipole on 21 MHz). It is sometimes tempting to use an antenna coupling unit at the transceiver to try to match (say) an 80 metre dipole on 40 metres. Everything may look good and low SWR may be indicated. However there will be a major impedance mismatch that will make the coaxial feedline lossy and the system inefficient. In contrast the same antenna fed with open wire feedline would radiate efficiently due to less loss.

b. Dipoles shorter than 3/8 wavelength at the lowest operating frequency. It is often a battle to fit the 40 metres of wire that an 80 metre dipole needs in an average backyard. A tuned feeder dipole or G5RV with 30 metres of wire is a good space-saving

substitute. However dipoles much shorter than this are lossy, even if fed with open wire feedline. For example, a 40 metre dipole used on 80 metres will be extremely poor. That is not to say that all compact antennas are inefficient. Again, for example, a 40 metre dipole with end loading coils and short tails can do well on 80 metres. Well-built magnetic loops of one to three metres diameter are also fine. All effective small antennas combine high efficiency but narrow bandwidth; those that claim wide bandwidth are highly inefficient, so are not recommended.

c. Quarter wave (or shorter) verticals and end-feds with poor ground systems. A vertical with a small footprint may initially appeal to the person with a tiny courtyard. They can indeed perform well if mounted on a building with a large metal roof.

However if you have no metal roof and radials are needed, the space needed increases. This is especially if you opt for elevated radials, which are more efficient.

A quarter wavelength end-fed wire (20 metres long on 80 metres) also needs to be fed against an efficient ground. A good ground can take longer to install than other antennas with no or lesser ground requirements, for example, half wave dipoles and end-feds, so take this into account when considering antennas.

d. Antennas whose radiation patterns do not favour those you wish to work. Different antennas have different polarisations and angles of radiation that affect your signal strength at the other end. An otherwise efficient antenna may fail if it projects only a weak signal to most of your likely contacts. Here are a few examples where good antennas wrongly used can perform poorly:

- Vertically-polarised beams or whips for two metres SSB. SSBers on two metres all use horizontal beams. Calling them with a vertical antenna will result in a signal report several s-units weaker than if horizontal polarisation was used. A simple horizontal dipole or halo will make a big difference, but a horizontally polarised beam is obviously preferred for longer distances.
- Verticals for 80 or 40 metres. Such antennas may work well for local ground wave contacts up to maybe 50 kilometres. Their low angle radiation is also great for DX.

  However many contacts made on 80 and 40 metres are over distances between about 50 and 500 kilometres. These sorts of intermediate distance contacts rely on skywave propagation arriving at quite high angles to the antenna. For such contacts a low angle antenna such as a vertical will not necessarily provide the best results on either transmit or receive. Alternatives such as a horizontal dipole, inverted vee or end-fed wire radiate more signal at high angles and may be better for medium distances. Add some of the other potential losses, such as traps (if multiband) and a possible poor ground system, and it is easy to see how verticals can be much weaker than a dipole for certain distances.
- Dipoles or horizontal wires for 160 metres. The reverse of the above example. 160 metres has a longer distance groundwave than either 80 or 40 metres, and, at least in Melbourne, numerous AM operators use it for local contacts during the day. Antennas here need to provide vertically polarised signals good for local groundwave propagation. Even short vertical antennas are better than a full-sized horizontal dipole for this purpose. In contrast evening sky wave contacts at distances just beyond where the ground wave signal finishes may report stronger signals from the dipole.

  The biggest amateur stations have two or three antennas per band so that the best can be chosen for the contact at hand. However if you can only have a single antenna per band or two ensure it is optimum for the contacts most often made. With ten watts on 80 and 40 metres this will be medium distances of several hundred kilometres. Fairly high radiation angles will be required, making a horizontal wire or dipole suitable.

Tip 4: Attend to audio

You sometimes hear signals that are strong but are not comfortable copy. Conversely others are barely stronger than the noise yet are readable. Your aim is to have audio that allows the latter. The following are the most common SSB audio problems and their causes:

- Distortion on audio peaks. Are often caused by a power supply too small to deliver the full current the transmitter needs, RF feedback due to poor grounding, decoupling or shielding, possibly entering the transceiver through the microphone, external speaker or power connections, or overdriving, due to excessive microphone gain or speech processing.
- Background noise or echo. Some stations sound like they are driving a truck even though they are at home. Linear amplifier fans, family members or the television are sometimes also heard, all reducing readability. The cure is to wind down the microphone gain or speech processor and talk closer to the microphone. Hard floors and walls can cause echo; install carpet, curtains and shelves with books to deaden the sound.
- Thin 'peaky' audio. Then there are the signals with strong audio peaks but not many lower level sounds. It's like they're talking through a comb and paper. Check that the microphone matches the transceiver, there is sufficient microphone gain and no RF feedback. Trying to use a badly adjusted, non-linear or oscillating final amplifier also spoils audio.
- Unbalanced audio response. Some signals are too bassy. They need more highs to add 'sparkle' and improve readability. Others lack bass and sound thin. They might also sound like they're speaking through a

cardboard tube or into a bowl. All are less readable than a signal with balanced audio. Bad audio can be due to a misaligned transmitter (the carrier frequency may be wrong relative to the response curve of the crystal filter), a faulty microphone or one whose impedance does not match the transmitter. Even simple things like experimenting with series and parallel capacitors around the microphone may improve the sound by attenuating lows and highs respectively.

Some stations aim for 'broadcast quality', to the extent this can be achieved on SSB, with plenty of bass. Others try for 'communications quality', which optimises readability under poor conditions. Good communications quality audio is punchy, but not overdriven, with the speech highs (1 – 2 kHz) boosted slightly to improve readability. Given that your ten watt signal will often only be 0 to 10 decibels above the noise at the other end, low power stations should aim for good communications quality but not overdo it.

Intelligent use of speech processors and audio compressors can increase average power levels without breaching licence conditions. They are recommended for marginal conditions. However they should be adjusted carefully as overdriving introduces distortion that lessens readability. Listen on 20 metres during a major international contest for examples of how processors should not be adjusted.

When setting up equipment, use a separate receiver to monitor your transmission, if one is available. Record the output with a voice recorder or computer. The latter with freely available software can also be used to monitor waveforms and audio response. Then ask everyone you speak to for audio reports. Some are more discerning than others and pretty soon you will get a good idea of how your audio sounds relative to other stations. Do not forget to get reports from both near and distant stations to get an idea of your audio under all signal conditions.

Tip 5: Operate portable

If you are pushed for antenna space or live in a noisy location, your ten watts will go further if you operate portable. Most Aussies live within an hour of hills or water. Or, if these locations are too far, a local park or reserve still provides room and RF quietness. Elevation, a good take off angle and/or a conductive ground from these sites can allow contacts not normally possible from home. Before going portable consider site selection, power supplies, antennas, bands to use and operating times. Site selection is a compromise between what is nearest home and what is best for radio. Much of the fun is trying various sites and comparing the results.

Power requirements are much easier for five – ten watts than 100 watts. A NiMH battery pack or gel cell will be fine for two or three hours, with more time possible if a solar panel is added. In contrast sustained operation on 100 watts needs heavy batteries, a generator or a nearby vehicle. Low power operators can carry their station to the best possible position while higher power stations normally cannot stray too far from their vehicle.

End-fed wires antennas are my favourites for HF portable. They are lightweight as they do not need feedlines. About 20 metres of wire is a good length; on 7 MHz it forms a half wavelength, so is less fussy about grounds than a quarter wavelength (a short counterpoise will suffice). And on 14 MHz that same wire can form a full wavelength delta loop if needed. It will also work on 3.5 MHz as a quarter-wavelength end-fed. Note the ground requirement; you may find that extending it by 20 metres to form a half wavelength is easier than improving the ground. Add an L-match antenna coupling unit to provide the transformation required. A nine metre telescoping squid pole is easily carried by hand and allows activity from places where trees are sparse, as are many coastal locations. It can easily support lightweight end-fed wires and inverted-Ls. All you need is something to tie it to, like a fence or post.

On VHF/UHF, a two to four element Yagi can triple or quadruple your effective power compared to a dipole, so is well worth the weight. On two metres a two element Yagi can be made from two pairs of TV rabbit ears in just a few minutes. A non-metallic pole such as a broom stick will save you from having to hold it up all the time.

Band choice depends on the season, sunspot numbers and the time of day. Summer days may

Photo 1: Operating portable can improve results possible with low power.

cause 15 and 10 metres to open for interstate contacts due to Sporadic E propagation. Summer evenings can bring tropospheric propagation, for extended range VHF/UHF contacts, but also lightning static that ruins 80 metres. Forty metres can be active during the day while 80 metres is dead. Conversely 80 metres can be good for winter evening contacts within your own state when 40 metres is not. Forty metres would be my pick if forced to choose one band for portable use. This is due to easy antenna requirements, band activity and a good chance of success. Even with a few watts, it's very seldom that you will go portable on 40 metres and not make a contact.

Tip 6: Scan the band

Radio is not like a mobile phone where you can call up anyone anywhere (but probably just get their voice mail!). Band propagation varies by day; signals from some directions will be strong and others weak. An hour or two later it might have all changed again. When switching on tune up and down the bands to gauge noise levels and signal strengths. Check beacons (3.699, 14.100, 18.110, 21.150, 24.930, 28.2 – 28.3, 144.4 – 144.6 and 432.4 – 432.6 MHz) to gauge propagation.

Listen in on contacts and note any signal reports given. Look up station locations in the WIA Callbook or on the QRZ website. Take note if it sounds like a contact is ending; either keep listening or remember the frequency to go back to later. Keep an eye on the VK Logger website to see what others are working. Several days or weeks of listening will soon reveal the regulars on the band and their usual signal strengths. This will help gauge band conditions. If your rig has memories enter frequencies for all the beacons, repeaters and simplex frequencies. This will allow monitoring when you are otherwise occupied.

Tip 7: Tail-end others

When calling CQ you are relying on people, who may or may not be present, to tune you in, decipher your callsign and then respond. People may assume you are running 100 watts, consider that, as your signal is weak, theirs will be too, and give you a miss. The easiest way to make contacts is to find others calling CQ or listen for conversations that are ending. Then call one of the stations when the frequency is clear. As most do not switch off immediately, and indeed may be about to resume calling CQ, the chance of a contact is high. All things being equal, the strongest station will be hearing you best, so it is probably better to call them first. Especially if you are portable or running low power, the other station may stick around to give you a report.

Having said that the weaker station may be further away and if you are up for a challenge maybe they are the one to call. And if they are on low power from a quiet portable location though weak they may be hearing you well and want to make contact. So calling the strongest station is not a hard and fast rule.

Tip 8: Time your calls

Listeners sometimes hear cases where two stations should be strong enough to make contact but somehow fail. Often this is due to bad timing, either by the station calling CQ or the one responding. Some stations call CQ, pause for about a microsecond, then resume calling while the station responding is announcing their callsign. Listening only briefly between calls is a poor operating technique. Both humans and equipment have automatic gain controls that make it hard to hear a weak signal immediately after a strong sound, in this case the caller's own voice. Several seconds is necessary to recover full hearing. If the station you are trying to call does not allow this sort of time, they are only after very strong signals. After three tries give up on them and look for others to call.

At other times it is the calling station that times it wrong. They may think a contact has finished but it has not. Hence they are calling over other stations, and sometimes even the person they wish to contact, who will not hear you if they are still talking! Had they waited a few seconds they might have been heard. On the other hand waiting too long may mean that everyone has switched off.

Timing is a skill that can only be learned through experience. You will find the pace varies according to band, operator style and time of day – DX and contest operators are more highly-strung for instance. A good general rule is to count to three before making a call or commencing a transmission to allow the CQ caller's ears to recover, give time for others to break in or allow the repeater to reset, if operating on FM.

Tip 9: Get the basics across first

Fading can mean that a signal that is initially readable becomes unreadable during the contact. So it's your turn to transmit, you have a long 'over', then your contact replies that he understood none of it. For DXing and QSLing purposes the two pieces of information your contact needs correct from you is your callsign and a signal report, with a serial number if a contest. If these are not received correctly it is not a valid contact. Name, location and other details are niceties that can be exchanged later if conditions permit. Then if conditions hold you can continue chatting as long as desired. If your contact has not got your callsign correctly, slowly repeat it as many times as required until they have. The same goes for the signal report and name. In any event it is a good idea to repeat these details two or three times if your report is any less than an S7 or S8.

And when the conversation moves onto other topics it is worth briefly repeating some of the main points. That way even if signals fade other stations should get the gist of your transmission. If signals don't recover after a couple of transmissions end the contact and seek another station who is hearing you better.

Tip 10: Call CQ

A previous tip suggested listening for others calling CQ or ending their contacts first, before calling CQ yourself. But there are times when

the band may be open but no one knows as everyone is listening. This is particularly the case for higher HF bands like 10 metres. If beacons can be heard and/or there is activity on 28.355 MHz USB but no one is talking, it makes sense to call CQ. Your call could be the one that alerts others that the band is open. And if conditions are particularly good, you may even get a 'pile up' of distant stations wanting to work you. Although the amateur bands are not channelised, many choose frequencies that are multiples of five kHz when calling. If you do the same there is a higher risk of being on the same frequency as a contact you cannot hear. While you are unlikely to interfere with that contact it does mean you will not get any calls from stations who can hear both you and the contact in progress. To lessen the probability of this it could be worth choosing an 'odd' frequency, that is, one away from a 5 kHz multiple, to call CQ.

Conclusion

This article has given some ideas on getting the most from low power. Try some of the techniques and you'll find that ten watts can do better than you ever thought.

VK3 news VK100ARV goes bush

Terry Murphy VK3UP
Event Coordinator
Amateur Radio Victoria
www.amateurradio.com.au

VK100ARV went bush on the weekend of the 19th and 20th of November when Terry Murphy VK3UP and others activated the special centenary call sign whilst portable in the Brisbane Ranges National Park as part of the inaugural Keith Roget National Parks weekend.

Set up commenced around lunchtime on Friday 18th with the positioning of the caravan and annex and erection of the ground mounted five band vertical as well as 80 and 40 metre inverted vees slung from the gum trees. We also set up a tripod mounted Diamond X50 for two metres and 70 centimetres.

The forecast storm activity arrived on time around 6 pm and we endured some heavy rain and watched with considerable interest as the lightning crashed to ground around us. The interval between the flash and thunder was only a few seconds at times so we were a little concerned having metal and wire antennas up in the air adjacent to the camp site. The antennas were not connected to the transceiver during the storm but would have made great lightning arrestors nonetheless.

After the storm had passed I was able to make a few calls under my own call sign to see how good the location was and to ensure the antennas were working as intended. We put VK100ARV to air at 11.00 am local Saturday morning amidst the continuing storms, and having to go off air and detach antennas from time to time due the very close proximity of the lightning.

We were pleased that we were being heard and made many contacts, mainly on 40 metres. Not only were stations eager to work us for the Brisbane Ranges National Park contact, but many were looking for contact with the centenary call to increase their points score towards the Centenary Award.

The final contact from the Brisbane Ranges was made around 14.30 pm on Sunday afternoon and we then packed up and headed home. I was also able to make a dozen or so contacts with the centenary call from my own QTH after dinner.

A special thanks to David Bruce and Michele Grant VK3FEAT for their assistance over the weekend.

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Put it in your diary and we will see you there for another big day out in Amateur Radio.

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Silent Key **Neil Leslie Jenkins VK3AEL**

It is with sadness that I report the passing of Neil Leslie Jenkins VK3AEL at Euroa on 24 October, 2011, in his 69th.year. Neil had been in poor health over the last few months and earlier this year his family had arranged for him to be near them in Euroa, at a nearby nursing home. Neil was suffering from motor neurone disease which affected him badly, as well as prostate cancer. (His father also died from motor neurone disease).

For most of his life Neil lived in Balwyn. He was born in nearby Kew, the eldest of three children. Schooling was at East Kew Primary School and Swinburne Technical School. Leaving school at age 16, Neil began an electrical trades apprenticeship. Soon after completion of his apprenticeship he branched out on his own with sub-contracting work. In the early 1970s Neil lived near and worked at the A1 gold mine for some years and, in more recent times, was involved with contract work at the Burnley Tunnel project.

I first met Neil in the late 1950s through our common interest in radio, when we were teenagers. We got our 'Z-calls' around the same time, 1959, and 10 years later our 'full calls'. It was also the time when AM and valves was the technology of the day, and 'home brew' equipment was common. Because of the licence restriction with 'Z' calls to VHF/UHF, it became the start of a long term interest in VHF/UHF for both of us.

Soon after obtaining his 'Z call', VK3ZJN, and in order to work longer distances, Neil became a keen portable operator with equipment on 50, 144 and 576 MHz.

This equipment included many spare car batteries in order to stay on air for as long as possible. Then hope the car engine would start up when it was needed! Neil also enjoyed two metre fox hunting. In those days you rushed around as fast as you dared to find the 'Fox transmitter'. Between 1959 and 1969 Neil and I travelled around VK1, 2, 3, 4, 5 and 8, often with six metre and two metre AM equipment. On a visit to friends in Woomera in 1969, all the VHF radio equipment had to be left at the main entrance with security and picked up when we left.

Neil was my 'Best Man' when I married in 1970. Over the years, Neil maintained his interest in electronics and science, amateur radio activity was mostly two metre FM to a few friends.

Neil had a fascination with the weather, using a backyard weather station; Neil recorded weather details, keeping track of long-term weather patterns and the effect on the environment and the bird life in his own backyard.

He is survived by his brother Douglas, sister Loris and her family. With thanks to Loris for help with this tribute. 73 Neil.

Submitted by Jim Forse VK3II.

Contests

Phil Smeaton VK4BAA
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Contest Calendar for February 2012 – April 2012

Feb	4/5	Mexico International RTTY Contest	RTTY
	11/12	CQWW RTTY WPX Contest	RTTY
	11	Asia-Pacific Sprint	CW
	11/12	RSGB 160 metres Contest	CW
	18/19	ARRL International DX Contest	CW
	24/26	CQWW 160 metres Contest	SSB
Mar	3/4	ARRL International DX Contest	SSB
	10/11	**RSGB Commonwealth Contest**	**CW**
	17/18	**John Moyle Field Day**	**CW/SSB/FM**
	17/19	BARTG RTTY Contest	RTTY
	17/18	Russian DX Contest	CW/SSB
	24/25	CQWW WPX Contest	SSB
April	**1**	**QRP Hours**	**CW/PSK31/RTTY/SSB**
	14/15	Japan Intl. DX Contest	CW
	21/22	YU DX Contest	CW/SSB
	22	**Harry Angel Sprint**	**CW/SSB**
	28/29	Helvetia Contest	CW/SSB
	28/29	SP DX RTTY Contest	RTTY

Note: Always check contest dates prior to the contest as they are often subject to change.

A belated Happy New Year to all for 2012 from the VK4BAA household. I hope that Santa once again emptied his sack in your shack with a nice shiny new rig!

With the turkey now all but consumed or frozen in readiness for making into soup or sandwiches, 2012 shows for a promising start as news arrives letting us know that plans made some time ago to try and redress the imbalance somewhat as regards VK maximum power output in comparison to other parts of the world are now coming to fruition. Even with the 'experimental' one kW in place as a permanent feature (which it currently isn't), VK would still be behind much of the ham world as regards legal power output limits. However, it's an excellent step forward and is testament to the hard work of many hams beavering away behind the scenes. Even the Kiwis might also claim a modicum of credit, as their recent licence tweak to raise output power was capitalised upon to call the ACMA back to the table for a chat. Contesters will, no doubt, take advantage of the raised limit, but at the time of typing this wee ditty, the full details of the ACMA caveats are yet to be confirmed – so time will tell!

One thing that was obvious in 2011 is that contesting is continuing to mature in Australia. The claimed scores submitted for the 2011 round of the Oceania, WPX and CQWW contests, for example, have increased yet again over those of 2010, with 28 MHz now featuring fully in contest logs as operators alter their strategies accordingly.

VK6 VKCC Xmas Gathering

The VKCCers in VK6 organised an evening of contest QRM chatter and food – see Photo 1. I am not sure if this picture was taken before or after the meal – but I don't see any drinks on the table (quite unusual!) and the pizza dish looks empty! I suspect that the dancing girls have long since vacated the area and maybe the sign on the table does little to describe the actual personalities of those present. A good time was reportedly had by all – but I am still waiting for my NCRG sponsored air ticket to Perth arrive...

The VK6 VKCC Spring meeting, 2011. L to R are Andrew VK6IA, Tony VK6AL, John VK6NU, Zeljko VK6VY, Richard VK6BEC, Wayne VK6EH, Keith VK6RK and Mirek VK6DXI.

2011 CQWW CW Contest

This contest saw a re-emergence of VK CW prowess, with the number of stations from VK participating increasing over 2010. Better band conditions tend to convince the masses that maybe they'd give it a go this time.

Amongst them, at long last, was me. I finally sat at the rig at the VK4KW inaugural M/S entry and donned headphones for this contest – but only on the 'multiplier' station as I'm still not quick enough off the mark for 'running'. The speeds that the 'old hands' get to during the contest were too fast for me initially, but after half an hour of sitting next to a proper operator my 'rust' started to drop away and I could accurately read the majority of what was being received, ultimately helping in my limited way to push the claimed score to 9.4 million for 5000 Qs. It had been quite some time since I'd participated in a CW contest. In a previous life, I was used to operating

during CQWW CW and using CW during other contests – both HF and VHF. A couple of years ago, I entered the CQWW CW contest as a single band 10 m entrant as 10 m was still in the cycle 24 doldrums and I wanted to see what the station (and I) could achieve in such conditions. 10 m was not likely to be very busy at that time and I was far too lazy to change sleep pattern for night time LF operation, so it seemed like a perfect choice. I operated for a few hours in bite sized chunks of time and managed to net 300 or so QSOs for my four hours of toil. The first few contacts were faltering to say the least, but I soon got into the swing of it. But, that was quite a while ago and I hadn't followed my promise to myself that I'd take up CW again and try to get back to the prowess that I had once attained. I'm still not there – there's a long way to go – but the contest in 2011 was a good re-introduction to the world of CW contesting for me.

One aspect which did not help my confidence was the continuing non-alignment between software generated information presented to the operator and 'real world' information. We used N1MM logger for the contest, which features a facility to pre-fill certain aspects of the contest exchange, based upon the callsign prefix entered into the PC. So as an example, entering VK4NM would pre-fill the zone entry box with '30' or entering G0HSS with '14'. Americans and Russians however, can cause the software to display incorrectly at times, as their licensing rules allow a callsign from a particular geographic area (and hence allocated a given prefix) to be utilised in a different area without modification which can confuse the software as it can only display information based upon whatever it has been told by the operator. For a fledgling CW operator, this tended to confuse me from time to time as I type in whatever I hear and not just rely on whatever the PC claims to already know. I was hoping that the PC would check my input but instead it seemed that I was checking the PC! So, it was not good news when yet another level of confusion was thrown into the mix – operators that send wrong information as regards their zone. A recent DXpedition which was active during the contest sent the wrong zone – but they sent it to everyone! However, thankfully, the organisers are aware of this type of hiccup and they use a common reference file which ensures that nobody will be penalised for an 'error'.

Even competent operators such as Bernd VK2IA, operating as VK6AA, got thrown a bit by this issue, but Bernd is an old hand at CW contesting and soon spotted and corrected the error. Bernd was active during the contest from the borrowed station of NCRG in Perth and reported LF as a bit of a poor show and 40 m was a struggle even for the monster beam of theirs pointing at EU. The EU QRM must've been awful. Bernd still netted around 7.4 million points for his claimed score as SOAB and 4500 QSOs, so something must've been working well!

David VK2NU found the bands not as lively as during the SSB event – which I'd concur with. David trawled through 10 m operating mainly as 'search and pounce' to grab over 100 multipliers/countries which is no mean feat with low power. Vlad VK2IM entered the contest as SOAB and achieved a superb score, beating Vlad's personal best to claim almost 5.3 million points for nearly 3650 Qs. The first 24 hours saw Vlad logging 1999 Qs, with an emphasis on 10 m taking most of the traffic.

The following VK teams were registered for the contest:

VKCC Dream Team

VK2GR, VK2NU, VK3TDX, VK6XX

VKCC Bushrangers

VK2IM, VK4UC (N6AA), VK6AA (VK2IA), VK6LW

Kevin VK6LW entered as single band 20 m, claiming 1.4 million points from just over 2900 QSOs. An excellent tally for a single band entry.

Laurie VK7ZE was a part-time entry, but Laurie's main reason for playing around was to keep tabs on propagation and see how the new 40 m quad performed. Something must've been working well, as Laurie netted 428 Qs for a claimed score of 323,604.

Chris VK3FY was invited to play in the contest at OM8A by station owner Tibi and didn't need to be asked twice! Chris had to leave before the end of the contest, but the tally was already 5000 Qs for a M/S claimed score of around 11 million points at that time.

A couple of weeks before the contest, a wind storm took down Steve VK3TDX's tower and beam so Steve only had a 40 m vertical with a trap and 80 m inverted L section for this contest. Steve was prepared for a very meagre run with this system figuring on only night-time 40/80 action. However, Steve found that his vertical loaded well on all bands and ten meters to EU seemed to be working as well as his beam. This is where the good news ended however, because Steve mentioned this fact to his XYL and how great he seemed to be doing without the lovely tower household decoration. Steve's XYL now needs some convincing that Steve really does need a tower and Yagi. Bad move Steve – it's often best to keep one's powder dry!

Dick N6AA operated from the station of John VK4UC for the contest, logging 3000 QSOs for 4.2 million points claimed. Dick worked a 10 m long path early one morning and was logging all manner of DX on the NA LP heading, which is a little bit strange – but obviously rewarding!

Allan VK2GR had family commitments so a limited amount of time was spent on the rig during the contest, but Allan still managed to log 300 Qs and 132,000 claimed points. Good going for low power Allan!

Tom OZ1AA operated from the station of Greg VK8GM for the contest weekend. Tom utilised 40 m up to 10 m for a claimed score of just under 3 million and 2900 QSOs. A great effort Tom! Tom's pre-contest mantra is one that I'd be keen to follow – if only I could. Tom arrived at

the station just before the start of the contest as the original M/S operation from the Alice Springs club got cancelled. After loading the contest software onto the PC and making a CW keyer cable, Tom started CQing on 15 m and logging NA and EU as fast as he could.

Mirek VK6DXI was away from home for the contest, visiting the station at SO4M instead. Along with like-minded fellows operating as M/2, SO4M claimed 10.8 million points for just under 6000 QSOs – despite Murphy having paid a call or two. Interestingly, the SP 10 m tally doesn't reflect the conditions experienced in VK, with just over 300 Qs recorded. However, LF was much more prominent to make up the shortfall – possibly due to seasonal differences.

2011 ARRL 10 metre contest

This contest was highly likely to be hotly contested due to the prevailing conditions bringing a few stations out of the closet and onto the band.

This year saw the Lockyer Valley Radio & Electronics Club VK4WIL entering to try and break their previous VK Multi-Single record set in 1999 when they used VK4DZ as the call. Ken VK4QH and Alan VK4SN decided to erect two antennas for the contest as Ken had just erected a six element monobander (made by Dave VK4NDX) and the beam width was very narrow. So, on the Friday prior to the contest Alan set up his portable mast and a tri-band beam for use as the second antenna. There were good conditions during the day, but a very nasty hail and lightning storm stopped operations for about three hours on the Saturday afternoon, and the band died around 9 pm local on both days. I can vouch for this, as my 'let's see what's on the band' type of entry experienced the same aggressive storm. After my experience during the CQWW SSB contest of receiving lightning damage to the station, everything got unplugged just in case! For VK4WIL (consisting of VK4HS, VK4SN, VK4MN and VK4QH) it made a bit of a difference to the end score, but not the end result and their previous record was broken by the team with 1,914 contacts (840 CW, 1074 USB), and around 1.45 million points, beating their previous record of 1.2 million. Nicely done gentlemen – but beware that others might be watching you with envious eyes and might plan to challenge you in 2012!

John VK4EMM operated as VK4CT, claiming 1.5 million points for just under 1900 QSOs. John much prefers CW, so it's not too surprising to see the score split with a heavy emphasis towards CW at 1500 QSOs! John also endured electrical storms, and also experienced some strange propagation with delayed echo on short-path to EU/Asia, confirmed with two beams - one on short-path and one on long-path. Something tells me that 10 m might be the band to watch during 2012!

Commonwealth Contest

Beru, otherwise known as the Commonwealth Contest, will be taking place in March, 2012. The format for the Commonwealth Contest 2012 team competition changed from 2011, in that the team size will be five and not 10. This will no doubt be welcome news to those who have previously been unable to make a full team and thus now make them more competitive. Latitude factor is also modified to 1.79 which is a reflection of the poor conditions experienced in 2011.

I note the rule now refers to teams in the plural, I presume this means, say, strongly supported teams like Canada, ROW etc fielding 'A', 'B' and 'C' teams. I'd have thought that each team of five would require a team captain however. VK team/s and captain/s is yet to be announced at this time, but the 2010 and 2011 team were a struggle to assemble (things must've been desperate as even I got asked!) and Kevin VK6LW did a superb job to get everything organised in time. Maybe I'll be ready to participate this year!

General rules for all WIA contests

A draft version of some general rules has been circulating recently. The main drive for these new rules is to simplify the myriad of rules currently in operation, so that the 'common' aspects are detailed in a single document which then allows each contest adjudicator to 'personalise' accordingly to their given contest. The document is still in its infancy and is yet to be ratified by the WIA, but more details are sure to follow in the coming months.

If you have any contest related material for inclusion within the column, topics that you would like covered or even some experiences and pictures you would like to share, then please feel free to get in touch via *vk4baa@wia.org.au* See you on the bands.

73 de VK4BAA Phil Smeaton

Results 2011 Westlakes Cup Contest

VK7VH Vince	38 Points	1st Place outright
VK4UH Kevin	35 Points	
VK4ZD Bill	34 Points	
VK2VV Graham	32 Points	
VK2ZM Alex	25 Points	
VK5PAS Paul	23 Points	
VK2FHRK Leonie	14 Points	1st Place Foundation
VK5JAZ Grant	13 Points	
VK2ACD Chris	11 Points	

Logs have been adjusted where needed after scrutiny to reflect final scores.

Thank you all for your participation.

See you next year.

David Myers VK2RD
Contest Manager
Westlakes Amateur Radio Club Inc.
30th October 2011

John Moyle Field Day Contest 2012

Presented by: Wireless Institute of Australia
Managed by: Denis Johnstone VK4AE/VK3ZUX

Overview

The aim is to encourage and provide familiarisation with portable operation, and provide training for emergency situations. The rules are therefore specifically designed to encourage field operation.

The contest takes place on the third full weekend in March each year, and this year runs from 0100 UTC Saturday to 0059 UTC Sunday, 17 - 18 March 2012.

Contest Rules

The contest is open to all VK, ZL and P2 stations. Other stations are welcome to participate, but can only claim points for contacts with VK, ZL and P2 stations. All VK, ZL, and P2 stations can claim points for all contacts, with any amateur station in world, as long as valid serial numbers are exchanged.

Single operator portable entries shall consist of ONE choice from each of the following (e.g. 6 hour, portable, phone, VHF/UHF):

a. 24 or 6 hour;
b. Phone, CW, Digital or All modes;
c. HF, VHF/UHF or All Bands.

Multi-operator portable entries shall consist of ONE choice from each of the following (e.g. 24 hour, portable, phone, VHF/UHF):

a. 24 or 6 hour;
b. Phone, CW, Digital or All modes;
c. HF, VHF/UHF or All Bands.

Home and SWL entries shall consist of ONE choice from the following 24 hour, or 6 hour, but only All Mode, and All Bands.

Definitions

1. A portable station comprises field equipment operating from a power source, e.g. batteries, portable generator, solar power, wind power, independent of any permanent facilities, which is not the normal location of any amateur station.
2. All equipment comprising the portable station must be located within an 800 m diameter circle.
3. A single operator station is where one person performs all operating, logging, and spotting functions.
4. A single operator may only use a call-sign of which he/she is the official holder. A single operator may not use a call-sign belonging to any group, club or organisation for which he/she has been sponsored except as part of a multi-operator entry.
5. A multi-operator station is where more than one person operates, checks for duplicates, keeps the log, performs spotting, etc.
6. A multi-operator station may use only one call sign for the duration of the contest.
7. Multi-operator stations may only use one transmitter on each band at any one time, regardless of the mode in use.
8. Multi-operator stations must use a separate log for each band.
9. Logs submitted electronically can use a separate Excel worksheet for each band linked to a summary sheet. A typical example is shown at http://www.wia.org.au/contests/ which can be copied and adapted for the individual use of either a single or multi operator station.
10. A station operated by a club, group, or organisation will be considered to be multi-operator by default.
11. None of the portable field equipment may be erected on the site earlier than 28 hours before the beginning of the contest.
12. Single operator stations may receive moderate assistance prior to and during the contest, except for operating, logging and spotting. The practice of clubs or groups providing massive logistic support to a single operator is, however, totally against the spirit of the contest. Offenders can be disqualified, and at the discretion of the WIA, may be banned from further participation in the contest for a period of up to three years.
13. Phone includes SSB, AM, FM and Simplex D-Star.
14. CW includes CW hand or computer generated. Fully automatic operation is not permitted. CW contacts will score 4 points for HF and 4 points for VHF & UHF contacts plus the distance points.
15. Digital modes include any other mode other than the above (Rules 13 and 14), such as RTTY, Packet, PSK31 etc, and may be used in the contest, but if they are, they shall be classed as Digital. Other modes such as ATV may be used and will be classed as Digital for scoring. Digital contacts will score points at the same rate as Phone. Another station may be worked only once per period on any digital mode: i.e. you cannot work them on RTTY, then on Packet, then on PSK31 - only one digital contact, regardless of mode, per period (see rule 18).
16. All amateur bands may be used except 10, 18 and 24 MHz. VHF/UHF means all amateur bands above 30 MHz. Note: On 50 MHz, the region below 50.150 has been declared a contest free zone, and contest CQs and exchanges may only take place above this frequency. Stations violating this rule may be disqualified.
17. Cross-band, cross-mode and contacts made via repeaters or satellites are not permitted for contest credit. However, repeaters may be used to arrange a contact on another frequency, as long as the repeater is not used for the contact.
18. Stations may make repeat contacts and claim full points for each one. For this purpose, the contest is divided into eight consecutive three-hour blocks: 0100-0359, 0400-0659, 0700-

0959, 1000-1259, 1300-1559, 1600-1859, 1900-2159, 2200-0059 UTC. If you work a station at 0359 UTC a repeat contact may be made after the start of a new block providing they are not consecutive, and are separated by at least five minutes since the previous valid contact with that station on the same band and mode.

19. Stations operating on Phone must exchange ciphers comprising RS plus a 3 digit number commencing at 001 and incrementing by one for each contact.
20. Stations must exchange ciphers comprising RS(T) plus a 3 digit number commencing at 001 and incrementing by one for each contact. (CW stations 599001). (CW stations contacting an overseas station who does not understand the rules for this contest, or is unwilling to give a valid serial number can generate a suitable serial number for the contact - as long as this fact is noted in the log.)
21. Portable stations shall add the letter "P" to their own cipher, e.g. 59001P.
22. Multi-operator stations are to commence numbering on each band with 001.
23. Receiving stations must record the ciphers sent by both stations being logged. QSO points will be on the same basis as for Home Stations, unless the receiving station is portable.
24. The practice of commencing operation and later selecting the most profitable operational period within the allocated contest times is not in the spirit of the contest, and may result in disqualification. The period of operation commences with the first contact on any band or mode, and finishes either 6 or 24 hours later.

Contest Scoring

Portable HF stations shall score 2 points per QSO. CW only contacts to score 4 points per QSO for contacts with either home or portable stations.

On VHF/UHF portable stations for Phone and Digital each contact scores 2 points per contact, and CW contacts score 4 points. In addition the VHF/UHF Portable stations shall add a distance score of the following on 6 m:

a. 0-49 km, 2 points per QSO;
b. 50-99 km, 5 points per QSO;
c. 100-149 km 10 points per QSO;
d. 150-299 km 20 points per QSO;
e. 300-499 km 30 points per QSO;
f. 500 km and greater, 2 points per QSO.

Portable stations shall add an additional distance score on 144 MHz and higher:

a. 0 to 49 km, 2 points per QSO;
b. 50 to 99 km, 5 points per QSO;
c. 100 to 149 km, 10 points per QSO;
d. 150 to 299 km, 20 points per QSO.
e. 300 km and greater, 30 points per QSO.

For each VHF/UHF QSO where more than 2 points are claimed, both the latitude and longitude of the station contacted or other satisfactory proof of distance such as the 6-figure Maidenhead Locator must be supplied.

Home stations shall score:

a. Two points per QSO with each portable station.
b. One point per QSO with other home stations.
c. For VHF/UHF QSO Home stations shall add as a distance score on 6 m:
   i. 0-49 km, 1 points per QSO;
   ii. 50-99 km, 2 points per QSO;
   iii. 100-149 km 5 points per QSO;
   iv. 150-299 km 10 points per QSO;
   v. 300-499 km 15 points per QSO;
   vi. 500 km and greater, 2 points per QSO.
d. Home stations shall add as a distance score on 144 MHz and higher:
   i. 0 to 49 km, 1 points per QSO;
   ii. 50 to 99 km, 2 points per QSO;
   iii. 100 to 149 km, 5 points per QSO;
   iv. 150 to 299 km, 10 points per QSO.
   v. 300 km and greater, 15 points per QSO.

Submitting your Log

For each contact: UTC time, frequency, station worked, RST/serial numbers sent/received and claimed score. (VHF and above location of other station and distance showing the Lat/Long or Maidenhead Locator to 6 figures for the station worked.)

Logs must be accompanied by a summary sheet showing: call sign, name, mailing address, section entered, number of contacts, claimed score, location of the station during the contest, and equipment used, and a signed declaration stating *"I hereby declare that this station was operated in accordance with the rules and spirit of the contest and that the contest manager's decision will be accepted as final"*. For multi-operator stations, the names and call signs (legible) of all operators must be listed.

The email address for this year's JMMFD contest should be setup a few days before the contest, and I would suggest to those that will be sending in your Logs electronically, to send in a test email with the words "TEST JMMFD 2012", in subject the line and also set the "READ REQUEST RECEIPT flag. Your call sign can then be added into the database for this year's contest. When actually submitting your log, if you do not receive an e-mail acknowledging receipt, then the log has not been received.

Paper logs may be posted to "John Moyle Contest Manager, 27 Laguna Ave, Kirwan, 4817 QLD". Alternatively, logs may be e-mailed *jmfd2012@wia.org.au*, *vk4ae@wia.org.au*, or snail mailed via the WIA Contest Manager, JMMFD, P.O. Box 2042 Bayswater, VIC 3153.

Club stations must forward in the first instance an electronic version of their log. Club Stations who submit only a paper log will have that log returned as unreadable, due to the very large amount of work involved in checking large paper logs.

The following formats are acceptable: Microsoft Excel or Word, ASCII text or electronic log programs such as VK Contest Log (VKCL). Logs sent by disc or e-mail must include a summary sheet and

declaration, but the operator's name (legible) is acceptable in lieu of a signature. Logs must be postmarked no later than 20 April 2012.

Certificates and Trophy

At the discretion of the Contest Manager, certificates will be awarded to the winners of each portable section. Additional certificates may be awarded where operation merits it. Note that entrants in a 24 hour section are ineligible for awards in a 6 hour section.

The Australian portable station, with the highest overall score will be awarded the President's Cup, a perpetual trophy held at Andersson House, and will receive an individually inscribed wall plaque as permanent recognition.

Contest Results

The results of the 2012 contest will be posted to the WIA website as soon as all postal logs have been received, scored and checked. In addition the results will be published in *AR* magazine and announced on the WIA News Broadcast as soon as possible within the following weeks.

Computerised Logging Software

Please check the website of your favourite logging programme for the most up to date version, as most programmers are now carrying out revisions to allow for this year's rule changes.

VK Contest Log (VKCL) by Mike Subocz (VK3AVV) has an excellent logging program and can be found at *http://web.aanet.com.au/mnds*

In line with the newly created WIA General Rules for Contests, from 2013 the contest log format will be revised to follow the Cabrillo format and a template will be developed and published in the 2013 rules. Time does not permit the changeover for this contest.

Contest Sponsor

The Wireless Institute of Australia.

Upcoming contest Date & Time

The next contest will take place on the third full weekend in March each year, and this year will run from 0100UTC Saturday 17th to – 0059UTC on Sunday 18th March, 2012.

I wish all entrants good luck, and look forward to hearing some of you on air during the contest!

N.B. new Email address: *jmfd2012@wia.org.au* will be set up close to the event for entries and you can check out latest info at *http://www.wia.org.au/contests/*

Contact Details

If anyone wishes to contact me privately to discuss rules etc, my home phone number is (07) 4723 4229, and my snail mail and e-mail addresses are as shown in the Log Submission section above.

Denis Johnstone VK4AE/VK3ZUX

Commonwealth Contest 2012 Prize Draw

2012 will be the 75th Commonwealth Contest (March 10th and 11th 2012) and to celebrate this we are going to have a prize draw which every entrant making more than 75 valid QSOs will be entered. And what a prize for the lucky winner - a **RFSPACE SDR-IQ Software Defined Radio** generously donated by **Martin Lynch of ML&S**.

The SDR-IQ is a 14-bit software defined radio receiver. It offers a broad range of spectrum analyzer and demodulation capabilities over the whole 0.0001-30 MHz band. The SDR-IQ can be used as a short wave receiver, as a spectrum analyser, as a panadaptor and as a precision measuring instrument.

All stations located in one of the Commonwealth Contest Call areas are eligible for this prize draw - making this a truly Commonwealth event.

What do you have to do to get into the prize draw?

All the entrants to the 2012 Commonwealth Contest who have, after adjudication, 75 or more valid QSOs will automatically be entered for the draw.

The full rules for the 2012 contest are at *www.beru.org.uk* and you are urged to read them carefully.

Make sure that you work more than 75 QSOs to leave some margin in case some of your QSOs are disallowed for some reason.

More information at *http://www.beru.org.uk/2012prizedraw/prizedraw.html* and on the Commonwealth Contest website at *http://www.beru.org.uk/*

The Centre Victoria RadioFest
Returns to the Kyneton Racecourse **Sunday 12th February 2012**
For all the latest information visit
www.radiofest.amateurradio.com.au

WIA adopts new General Rules for contests

Trent Sampson VK4TI

For some time the various contests in VK had evolved in different directions and many of the terms and rules contradicted other contests.

This situation was both frustrating and confusing to entrants.

At the Darwin AGM the WIA board resolved to adopt a set of general rules that guided all individual contest rules - this format had been adopted by both the ARRL and the RSGB – The board asked all the contest managers of supported WIA contests to be part of the Contest Panel and with the task in hand an email meeting was held.

The Contest Committee was formed by two WIA directors Bob VK6POP and Trent Sampson VK4TI, and the managers of the contests, Peter Harding VK4OD, John Martin VK3KM, Denis Johnstone VK4AE, Brian Miller VK3MI and Kevin Johnston VK4UH.

Initially the committee looked at what was current in the UK and USA – and decided that the RSGB model was closer to the needs of VK amateurs with some modifications – these modifications took many weeks and it was very interesting how many implications would occur with even the simplest of modifications.

Of concern was that the character of a particular contest was not ruined by rule changes – and so the very first rule was considered important and that is:

1. These rules apply to all WIA Contests, except where inconsistent with a specific rule of a particular Contest.

Most other items are self explanatory. However the committee needed to modify some of the wording to cover operating practices in Australia on VHF/UHF and also some of the gender specific wording was removed.

The section regarding portable operation was a mix of the current VHF/UHF Field Day and John Moyle rules to ensure consistency.

Ongoing the WIA strongly supports the contest sector and has sourced code/ software for the checking of contest logs and submission – this is mainly done via a standard known as Cabrillo that was developed by Trey Garlough N5KO and this is the default standard for contest logs.

Cabrillo caters for most international contests and our local software VKCL can output Cabrillo files – it has features unfamiliar to many like "soapboax" which is basically where you can input your comments about the contest prior to submission.

We trust that the new general rules clarify the stands of the various contest mangers.

General Rules for All WIA Contests

1. These rules apply to all WIA Contests, except where inconsistent with a specific rule of a particular Contest.
2. Entrants must abide by their licence conditions.
3. Contacts:
   (a) A contact consists of an exchange with acknowledgement of receipt of callsign and contest data. Incomplete contacts must be logged with zero points claimed. Points are not lost if a non-competing station does not send appropriate information, but a report must be logged and any other exchange sent by that station must be recorded. The full contest exchange must be sent to all stations worked.
   (b) In the time period relative to the specific contest one contact only with the same station per band counts for points, regardless of that stations operator or callsign. More than one contact with the same operator using different call-signs may not be claimed. Contacts with stations which have no other contest contacts may be disallowed. Duplicate contacts must be logged, with zero points claimed.
   (c) Cross-band contacts do not score.
   (d) Contacts scheduled before the contest do not count for points. Schedules may only be made during the contest.
   (e) Simultaneous transmissions on more than one frequency are permitted, in multi-operator / assisted events use of VHF/ UHF to access the DX cluster is permitted. Access must be to the public cluster network, private clusters are not permitted.
   (f) The active use (posting messages, arranging skeds, self-spotting etc.) of the DX Cluster, and other spotting networks (including internet facilities for example VK Logger) to assist an entry is not permitted unless the contacts are on VHF and higher frequencies i.e. 50 MHz and above.
   (g) Proof of contact may be required.
   (h) For contest purposes, / Aeronautical Mobile (AM) and / Maritime Mobile (MM) stations are treated as /Mobile stations in their own country. Other stations are regarded as being in the call area/country indicated by their call-sign as sent.
4. Portable stations:
   (a) Stations can be located in a permanent building or shelter.
   (b) A station is portable only if all of its equipment is transported to a place which is not the normal location of any amateur station.
   (c) All equipment, aerials and supports must be set up on site no more than 28 hours before the start of the contest. This does not apply to short term storage of equipment on site.
   (d) All portable stations should sign /P when taking part in any WIA contest with a portable section.
   (e) Portable stations may change location during the contest provided the station is dismantled and reassembled each time it moves.
5. Entrants:
   (a) A single-operator station is operated by one person, who receives no assistance whatsoever from any other person in operating, log-

keeping, checking and so on, and who does not receive notification of callsign information by packet, telnet, telephone or any other method including wide band (greater than 3khz) skimmer and skimmer-like technologies.

(b) Multi-operator entries are those not covered by 5(a). One operator must act as Entrant and submit the entry.

(c) All transmitters and receivers used by the entrant must be located within a single 500-metre diameter circle or within the property limits of the station address, whichever is greater. All antennas used by the entrant must be physically connected by wires to the transmitters and receivers used by the entrant. An entrant's remote station is determined by the physical location of the transmitters, receivers, and antennas. Only one station may be used by the entrant during the contest period. That means, for example, that an entrant may not work themself by use of a second, remote, station nor may that second station be used to aid the operation of the entrant's station.

(d) There is no requirement that any entrant is a member of the Wireless Institute of Australia.

6. Adjudication:

(a) Errors in sending / receiving are penalised by the loss of all points for the QSO.

(b) Points may be deducted or entries disqualified or excluded for any breach of the rules or spirit of the contest. Subject to Rule 7 of these Rules, the decision of the WIA is final.

(c) The practice of club stations recruiting or pre-arranging contacts with other station from within that group, including from operators of the station itself, where there is no intention to make contact with other contest stations, is considered unfair and not in the spirit of the contest. Such practices may lead to disqualification.

7. Disputes:

The Manager of the Contest should be approached in the first instance and any issues should be resolved with them. If the matter cannot be resolved by the Contest Manager, the person concerned shall be invited to fully set out their concerns in writing (which shall include by facsimile or email), within 7 days, which shall be referred to the WIA Director responsible for contests. That Director shall convene a meeting of the Contest Committee comprising at least, themself and two other WIA Contest managers and ensure that the person concerned is given the opportunity to comment on any material or submissions provided by the Contest Manager.

That committee shall then determine the matter (within 7 days of receipt). The Contest committee's decision shall be final and binding.

8. Entries:

(a) Log entries may be submitted by email, or on paper. Paper entries are acceptable only if logging during the contest was not done on computer. The Contest Manager reserves the right to treat any entry as a check log. Subject to the rules of a particular Contest, the entry must be sent no more than 30 days after the end of the Contest. Log entries become the property of the WIA.

(b) The preferred log format for computer entries is Cabrillo. Entrants unsure of what information is required for a particular Contest are encouraged to use software which provides full support for WIA contests.

(c) Computer entries must be named with the stations callsign and the extension .log. Portable stations should use a hyphen, e.g. vk3xyz-p.log. For Cabrillo entries this is the only file that is required.

(d) The log entry robot must be used for online entry to all WIA contests unless indicated otherwise in the rules of a particular Contest.

(e) Paper logs should be sent to the WIA national office. Acknowledgement will be sent if a stamped, addressed postcard or IRC is enclosed.

(f) Paper logs (and any not in Cabrillo format) must ensure the following information is shown for each contact: Time, Callsign worked, RS(T)/serial sent, RS(T)/serial received, other data (specific to the contest), new bonus/multiplier, QSO points.

(g) Paper summary sheets should include the following declaration "I declare that this station was operated in accordance with the rules and spirit of the contest and within the conditions of my licence. I agree to the data from this entry being entered into a computer for the purposes of contest adjudication and production of statistics. I agree that the decision of the Board of the WIA shall be final in all cases of dispute." By submitting an entry in email or any other format a contestant shall be deemed to have made a declaration to the same effect.

(h) Entrants shall ensure that the section or category being entered is clearly shown in the header or summary sheet. Entrants are encouraged to use soapbox lines in the Cabrillo header to give information about the equipment and antennas used as well as comments about the contest.

9. Changes to Rules:

No change to these General Rules or to the Rules of a particular Contest shall be effective until approved by the WIA Contest Working Committee which must comprise at least the designated WIA Contest Director and at least two other managers of WIA Contests and published in *Amateur Radio* magazine.

10. Awards:

Trophies as specified will be presented at the WIA Annual Conference or similar appropriate event and will be held for a maximum period of one year for any particular annual event. Certificates will be awarded to leading stations in each category/band as appropriate.

VK3news Amateur Radio Victoria

Jim Linton VK3PC
www.amateurradio.com.au

After the holiday period

The office will reopen on Tuesday, 7 February. During the break urgent matters were dealt with while office-bearers worked on the financial statements to be audited and presented to the membership. Located at 40g Victory Boulevard, Ashburton, the function of the office is primarily to process mail, membership applications and renewals, public enquiries, keep the QSL bureau up to date and assist with membership services.

Thanks go to the small but dedicated team of volunteers who handle administrative matters at the office on Tuesdays between 10 am and 2 pm, including the VK3 QSL bureau, handling incoming correspondence.

The Annual General Meeting will be held at the office on Wednesday, 16 May and Notices of Motion for it closes with the Secretary at 2 pm on 20 February.

New class dates

Want to enrol for the quality Foundation Licence training course, a popular Bridging Course to the Standard Licence or do assessments? The next Foundation Licence weekend is March 24 and 25.

For those already qualified at the Foundation level, the Standard Bridging Course will be held on Wednesday's 7, 14, 21 and 28 March, and 4 April. Saturday, 14 April is for revision with assessments on Sunday, 15 April. To enrol, or for more information, contact Barry Robinson VK3PV, on 0428 516 001 or *foundation@amateurradio.com.au*

Centenary celebrations – a brief report

The celebration of 100 years since the formation of what is now known as Amateur Radio Victoria went very well thanks to the volunteers around Victoria and those who participated throughout Victoria and overseas.

Trevor Close VK3ATX, one of the operators from the Western and Northern Suburbs Amateur Radio Club (WANSARC) at their VK100ARV activation at Bundoora Park.

The highlights included nearly 5,500 contacts with the special callsign VK100ARV, a total of 19 activations under the Keith Roget Memorial National Parks Award and the number of Centenary Awards issued.

It also featured the world's first D-ATV QSO Party, the SSTV weekly sessions and lots of DX worked during its 30 days of rostered operation. Meantime the VK100ARV QSL cards and award certificates are being issued. A full report on the Centenary will be published soon.

VK3RHO back on air

After some years, and a lot of hard work, the Albury Wodonga Amateur Radio Club has the strategically located two metre repeater at Mt Hotham back in service. The enthusiasm behind the project came at a cost, including some refurbishment, sourcing power and site fees.

The Albury Wodonga Amateur Radio Club is to be congratulated in its efforts. It now fills a missing gap in the repeater network in the north-east of Victoria. It covers a wide area of the High Plains and will be useful particularly during the annual Roof Top Run from Mt Bogong to Mt Hotham - it is a WICEN event. If you live in the area or are just passing through, give it a try with 147.650 MHz in and 147.050 MHz out.

Centre Victoria RadioFest

The final touches are being made to the biggest event of its type in Victoria with the main commercial traders, second-hand sellers, club corner precinct and mini-lecture programs ready. A lot of hard work is needed to bring it all together but from what the organisers and individual coordinators can tell us all is set for another successful family friendly event. Remember it is on Sunday, 12 February at the Kyneton Racecourse. See all of the details at *radiofest.amateurradio.com.au*

VK2news

Tim Mills VK2ZTM
vk2ztm@wia.org.au

Welcome to 2012 from Amateur Radio News South Wales. ARNSW members are advised that their AGM will be held on Saturday, 21 April, 2012. Close of nominations and receipt of agenda items and notice of motions will be Saturday, 3 March, 2012. Further details via VK2WI bulletins and the ARNSW web site *www.arnsw.org.au* AGM paperwork and other material is sent to members by either post or email. Please ensure that email and postal addresses are up to date with the membership secretary via *membership@arnsw.org.au* Recently the VK2 clubs listing on the ARNSW web site was changed from listed details to links to the various club sites.

The end of February is the annual Central Coast Field Day at the usual venue – Wyong Racecourse – on Sunday, 26 February, which has become the largest one in Australia. This long running event in the period round 1950s/1960s was held in November at the Gosford Sailing Club. Then a move to the Gosford Showground for a couple of decades until the transfer to the present site at Wyong. ARNSW assessors will again be at the field day for all grades of license assessment. Inquiries to *education@arnsw.org.au* or telephone 02 9651 1490/0400 445 829 and leave contact details.

ARNSW has scheduled one day Foundation courses every two months. The next will be on Sunday, 18 March, with the assessments a week later. The weekly upgrade course for Standard and Advanced licence for this year will resume on Monday, 5 March and then each week except on public holidays. Contact details as above. All these activities are held at VK2WI, 63 Quarry Road, Dural. Readers are asked to pass on these details to those they may know who are seeking study and exam venues. See the ARNSW web site *www.arnsw.org.au* Click on 'Training and Exams' on the home page for details. Second edition WIA Foundation Manuals and the 5th edition of the Swainston Handbook are available for collection from VK2WI. The next Trash & Treasure, exam assessments and Home Brew gathering at VK2WI will be on Sunday, 25 March.

During the latter part of last year work was carried out at VK2WI to provide fire fighting facilities by making use of the rainwater tank on site. In addition, earthworks were carried out to install piping for underground feeds to the HF antennas, an ongoing project for much of this year. This year additional toilet facilities are being added.

During January many clubs have been in recess and will resume meetings in February. These include the Hunter Radio Group on Friday the 10th at NBN Studios. Their VK2AWX news net starts up the previous Monday evening. HADARC meetings from the 14th and 28th February. St. George ARS on 1 February.

Waverley ARS have a Foundation Course over the weekend 11th and 12th February. *education@vk2bv.org* They recently changed access tone on VK2ROT 7025 to 91.5 Hz. No change on their 70 cm 8575. The Oxley Region ARC moved their mid-week net to Thursday at 7.30 pm. They are developing an APRS node at the VK2RPM site as VK2RPM-1 on the Australian frequency of 145.175 MHz. The weekly VK2BWI Morse training session provided by Ross VK2ER and Geoff VK2BGP resumes Thursday the 2nd on 3.550 MHz at 2000 hours VK2 time. Ross thanks listeners for callbacks received last year. These are always taken at the end of each session and are most welcome. The Mid South Coast ARC is scheduled to have a quarterly meeting on Saturday 11 February. Looking ahead there is the annual Urunga Convention over Easter.

During the latter part of last year the NSW Government conducted a Planning Systems Review into the operations of local government. It was promoted from within the Amateur Radio Service as an opportunity to seek uniform State-wide regulations for the erection of towers and masts in their domestic locations. In excess of one hundred amateurs put pen to paper (or keyboard) and made submissions to the review. In fact these were more than half the submissions received - it was reported. However it was subsequently advised at some public meetings that these antenna/tower submissions were outside the review guidelines. An Issues Paper on the review to date was released in December 2011 to which further submissions can be made by 17 February, 2012.

CENTRAL COAST AMATEUR RADIO CLUB INC.

Wyong Field Day

Sunday 26 February at Wyong Race Course

ALARA

Margaret Blight VK3FMAB – Publicity Officer

Photo 1: Guests at the VK3 ALARA Christmas luncheon, at the home of Susan VK3UMM.

Greetings and a Happy New Year to all. 2012 is shaping to be a very interesting year. In May the International YL Meet will be held in Adelaide. Already 45 YLs have registered and 25 others shown interest. If you are considering attending the Meet registrations need to be made by the end of March, 2012. For those interested in taking the trip on the Ghan after the meet, bookings need to be in by the end of February. Further information can be obtained through *http://www.ylinternational 2012.com* or contact ALARA President Tina VK5TMC on *vk5tmc@internode.on.net*

IOTA Marathon

Lyn VK4SWE has alerted us to the IOTA Marathon which takes place from 1st January, 2012 through to 31st December, 2013. All licensed amateurs worldwide are encouraged to participate. The event is part of a build up for the celebrations of the 50th anniversary of the launch of Islands On The Air (IOTA). For a two year period IOTA chasers are seeking to contact as many IOTA groups as possible. To learn more about this exciting event, please go to *http://rsgbiota.org/marathon/index.php*

Yarra Ranges Ham Sale

On 12th November, many operators attended the Yarra Ranges Sale. These sales are a great opportunity to meet and greet other amateurs. Several ALARA members attended to attempt to sell some 'pre-loved' radio articles.

Adelaide hamfest

Jean VK3VIP, the VK3 state representative and her OM John VK3DQ visited the hamfest in Adelaide last November. They travelled from Melbourne on the Overland train, although taking their car with them, and found it a novel experience.

The trip was an opportunity to meet up with a number of South Australian ALARA members. The couple felt royally entertained by the VK5 ALARA group and Jean VK3VIP was lucky enough to win one of the raffle prizes at the hamfest, a supergainer antenna donated by Strictly Ham.

ALARA VK3 Christmas lunch

This year we all travelled to Plenty to enjoy the hospitality of Susan VK3UMM who hosted our end of year get together. Despite the weather being overcast with intermittent showers, we all managed to arrive safely.

Those without their GPS may have found the location, tucked away in a bushy area, a little hard to locate but we all made it.

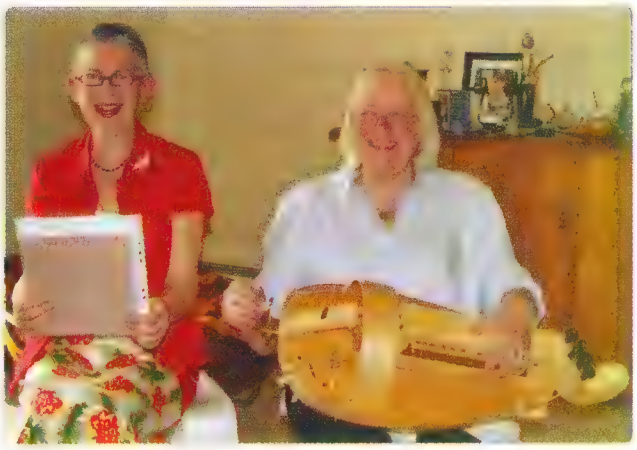
In a warm, friendly atmosphere everyone enjoyed the luncheon provided and the following sweets were delicious. Our thanks to all the contributors. Our hostess and Pam then entertained us with a musical performance of song accompanied by an unusual musical instrument, the Hurdy Gurdy.

Kris Kringle presents were duly presented; it's amazing how versatile people can be when looking for a gift in the $5.00 range. It was a lot of fun opening up the wrapping to see what was inside.

News from Shirley VK5YL about the death of an American friend

Jean C. Blakeslee WB8FIC – Silent Key. Jean C. Blakeslee, 85, of Delaware died Saturday, 5 November, 2011 at her home. She was born on 13 October, 1926 in East Rochester. She received her BA from OWU and her MS from OSU. A resident of Delaware since 1944, Jean was a retired teacher, having taught at Smith and Conger Elementary Schools. Among other things, she was a keen ham radio operator, a retired director of the In-Service Training Program, a member and trustee of the First Presbyterian Church, Delara, Buckeye Belles and the Cosmopolitan Club and served on the boards of Oak Grove Cemetery, the Habitat for Humanity and Council for Older Adults.

Photo 2: Susan VK3UMM and Pam entertaining at the VK3 ALARA Christmas luncheon.



Spring VHF-UHF Field Day 2011: Results

Contest Manager: John Martin VK3KM

A week before the Spring Field Day, the weather was looking very promising. Not so on the day - a number of regular participants operated from home instead of going portable. And a number of those who went portable came back feeling a little damp. Still, all good fun.

According to the rules, the winner of Section A is barred from Section B, and likewise for Sections C and D. That left a total of 72 logs from 64 entrants. The winners of the six sections were: Matt Hetherington VK2DAG, John Ross VK5NI, the Eastern and Mountain District Radio Club VK3ER, the Elizabeth Amateur Radio Club VK5LZ, Ross Keogh VK3MY, and Dan Joyce VK2GG. Congratulations to all.

Call	Name	Location	50 MHz	144 MHz	432 MHz	1296 MHz	2.4 GHz	3.4 GHz	5.7 GHz	10 GHz	24 GHz	47 GHz	TOTAL
Section A:	**Single Operator, 24 Hours**												
VK2DAG	Matt Hetherington	QF56, QF57	77	276	455	616	770	770	760	760	660	-	5144
VK4OE	Doug Friend	QG62, QG63	69	468	460	576	570	440	220	440	-	-	3243
VK3ES	Andy Sayers	QF22	-	444	620	720	390	-	-	400	-	-	2574
VK5TE	Simon Brandenburg	PF94	24	267	440	512	210	440	-	-	-	-	1893
VK5LA	Andy Williss	PF85	32	411	565	616	-	210	-	-	-	-	1834
VK4ADC	Doug Hunter	QG61, QG62	63	291	365	352	330	320	-	-	-	-	1721
VK2MER	Kirk Mercer	QF55	93	588	645	304	-	-	-	-	-	-	1630
VK4HBG	John Collins	QG62	-	945	310	-	-	-	-	-	-	-	1255
VK5MK	Mark Hutchinson	PF94	75	258	400	520	-	-	-	-	-	-	1253
VK1PAR	Al Long	QF45	44	513	355	-	-	-	-	-	-	-	912
VK4NE	Mick Marinkovic	QG62	48	270	250	272	-	-	-	-	-	-	840
VK1DSH	Dale Hughes	QF45	53	165	215	-	-	-	-	-	-	-	433
VK2ARA	Ted Thrift	QF55	9	51	30	-	-	-	-	-	-	-	90
Section B:	**Single Operator, 8 Hours**												
VK5NI	John Ross	PF95	-	153	255	368	-	480	440	330	-	-	2026
VK5TE	Simon Brandenburg	PF94	23	255	430	488	210	440	-	-	-	-	1846
VK3PF	Peter Freeman	QF31, QF32	21	177	230	272	320	-	320	320	-	-	1660
VK5OQ	Keith Gooley	PF95	45	207	385	480	-	330	210	-	-	-	1657
VK5LA	Andy Williss	PF85	32	264	380	560	-	210	-	-	-	-	1446
VK3LY	Bill Day	QF03	46	375	380	448	-	-	-	-	-	-	1249
VK5MK	Mark Hutchinson	PF94	69	240	370	496	-	-	-	-	-	-	1175
VK5AR	Alan Raftery	PF94	-	345	415	-	-	-	-	-	-	-	810
VK3RU	David Williams	QF23	-	228	265	280	-	-	-	-	-	-	773
VK2HRX	Compton Allen	QF56	35	246	185	-	-	-	-	-	-	-	466
VK5KPR	Peter Banks	PF87	33	132	110	-	-	-	-	-	-	-	275
Section C:	**Multi Operator, 24 Hours**												
VK3ER	EMDRC	QF22	194	855	1100	1240	700	350	450	630	-	-	5519
VK3UHF		QF21	76	612	935	1008	680	460	680	770	-	-	5221
VK5LZ	Elizabeth ARC	PF95, PF96	72	384	560	720	760	860	690	670	-	-	4716
VK3ALB		QF11	48	393	580	688	590	360	350	480	-	-	3489
VK5SR	SERG	QF02	54	318	435	664	440	210	210	340	-	-	2671
VK2MA	HADARC	QF56	104	276	290	272	210	210	-	-	-	-	1362
VK4WIE	CBRS	QG60	91	456	320	264	-	-	-	-	-	-	1131
VK2BOZ		QF68	75	561	210	216	-	-	-	-	-	-	1062
VK5KC		PF84	21	240	305	184	-	-	-	-	-	-	750
VK2LE	St George ARS	QF56	33	246	225	-	-	-	-	-	-	-	504
Section D:	**Multi Operator, 8 Hours**												
VK5LZ	Elizabeth ARC	PF95, PF96	70	333	510	696	750	830	680	660	-	-	4529
VK3ALB		QF11	45	381	565	680	580	350	350	470	-	-	3421
VK4IZ	Redcliffe DARC	QG62	64	312	380	360	-	-	-	330	-	-	1446
VK5OM		QF03	35	279	410	344	-	-	-	-	-	-	1068
VK2EH	CCARC	QF56	32	258	285	-	-	-	-	-	-	-	575
VK1MAT		QF44	45	252	235	-	-	-	-	-	-	-	532
Section E:	**Home Station, 24 Hours**												
VK3MY	Ross Keogh	QF22	69	576	815	792	450	-	-	-	-	-	2702
VK3VFO	Nick Kraehe	QF31	35	525	500	352	370	-	-	-	-	-	1782
VK3GL	Graeme Lewis	QF21	117	564	615	440	-	-	-	-	-		1736

Call	Name	Location	50 MHz	144 MHz	432 MHz	1296 MHz	2.4 GHz	3.4 GHz	5.7 GHz	10 GHz	24 GHz	47 GHz	TOTAL
VK4VDX	Roland Lang	QG62	41	507	520	624	-	-	-	-	-	-	1692
VK5AKM	Keith Minchin	PF95	46	255	370	600	-	390	-	-	-	-	1661
VK5NE	Paul Roehrs	PF95	90	453	515	456	-	-	-	-	-	-	1514
VK3HY	Gavin Brain	QF22	80	444	500	368	-	-	-	-	-	-	1392
VK3NFI	Dean Webster	QF31	42	345	415	424	-	-	-	-	-	-	1226
VK3JTM	Tim Morgan	QF12	-	102	165	272	210	-	210	210	-	-	1169
VK4KLC	Ron Melton	QG62	84	411	490	-	-	-	-	-	-	-	985
VK3YFL	Bryon Dunkley-Smith	QF22	38	186	280	416	-	-	-	-	-	-	920
VK5ALX	Alex Glinski	PF86	45	285	300	256	-	-	-	-	-	-	886
VK5LD	Dale Loffler	PF96	21	273	300	264	-	-	-	-	-	-	858
VK4ALH	Leicester Hibbert	QG63	39	255	250	312	-	-	-	-	-	-	856
VK3PF	Peter Freeman	QF31	-	120	135	208	230	-	-	-	-	-	693
VK3KIS	Andrew Kayton	QF22	-	147	230	288	-	-	-	-	-	-	665
VK2BO	Richard Neilsen	QF56	64	150	115	264	-	-	-	-	-	-	593
VK3TOM	Tom Steadman	QF31	29	237	225	-	-	-	-	-	-	-	491
VK2LSB	Stuart Bayliss	QF55	-	207	102	168	-	-	-	-	-	-	477
VK4RY	Richard Philp	QG63	24	132	135	184	-	-	-	-	-	-	475
VK2EI	Neil Sandford	QF68	22	258	120	-	-	-	-	-	-	-	400
VK3BJZ	Bevan Jackel	QF21	38	147	205	-	-	-	-	-	-	-	390
VK3HV	George Francis	QF31	37	123	150	-	-	-	-	-	-	-	310
VK3FRAE	Rae Billing	QF31	-	81	120	-	-	-	-	-	-	-	201
VK2FPOL	Alex Sentana	QF56	-	126	-	-	-	-	-	-	-	-	126
VK3ZHQ	Eric Warren-Smith	QF22	-	120	-	-	-	-	-	-	-	-	120
VK4ATH	Tom Hatton	QG62	60	-	-	-	-	-	-	-	-	-	60
Section F:	**Rover Station, 24 Hours**												
VK2GG	Dan Joyce	QF55, QF56, QF57, QF58, QF67, QF68											
			142	432	720	1136	1420	1420	1420	1400	1410	1380	10880
VK2CQ	Dave Maloney	QF55, QF56, QF57, QF58, QF67, QF68											
			140	426	710	1120	1400	1400	1400	1410	1410	1380	10796
VK5ZT	Tim Dixon	PF84, PF85, PF86, PF95, PF96											
			64	330	565	888	650	1030	660	660	-	-	4847
VK3VL	David Harms	QF32, QF42	-	138	-	-	-	-	-	-	-	-	138

Notes

VK1MAT Matt Bowman VK1MAT, Shane Goodwin VK1MAD

VK2EH Central Coast Amateur Radio Club: David Hardy VK2JDH, Colin Matten VK2KCM, Ed Durrant VK2ARE

VK2LE St George Amateur Radio Society: Peter O'Connell VK2EMU, Peter Mahoney VK2JTV, James Goh VK2GOH, Greg Bain VK2FAAS, Cameron McKay VK2CKP

VK2MA Hornsby & District Amateur Radio Club: David Harvey VK2DMH, Peter Pratt VK2TTP, Rod Gamble VK2DAY, Dave Wallace VK2FDIW, Stephen Diekman VK2FSDO, Justin Lavery VK2CU, Bob Mayer VK2BMU, Colin Christie VK2JCC, Jim Omeros VK2LC

VK2BOZ Cris Perrett VK3BOZ, Brenda Taylor VK2FSMI, Doug Tufrey VK2FWWD

VK3ER Eastern & Mountain District Radio Club: Mike Subocz VK3AVV, Andrew Scott VK3BQ, Peter Forbes VK3QI, Max Chadwick VK3WT, Jack Bramham VK3WWW

VK3ALB Lou Blasco VK3ALB, Nik Presser VK3BA, Peter Westgarth VK3APW, Jenni Blasco VK3FJEN, Michael Blasco VK3FMIC

VK3UHF Charlie Kahwagi VK3NX, Chas Gnaccarini VK3PY, David Learmonth VK3QM

VK4IZ Redcliffe & District Radio Club: Kevin Johnston VK4UH, David Close VK4DC, Phil Howe VK4IIO, John Maudsley VK4YJV

VK4WIE City of Brisbane Radio Society: Ken Myers VK4GC, John Morris VK4MJF, Colin Cortina VK4MIL, Ron Croucher VK4CRO

VK5KC David Clegg VK5KC, John Dawes VK5BJE

VK5LZ Elizabeth Amateur Radio Club: Iain Crawford VK5ZD, Scott Jackson VK5FSKS, Peter Murphy VK5RX

VK5OM Jim Bywaters VK5OM, Bill Day VK3LY, B. Farmers VK3AQX, L. Ferris VK3BUN, P. Sherlock (SWL)

VK5SR South East Radio Group: Colin Hutchesson VK5DK, Trevor Niven VK5NC, Tony Hutchison VK5ZAI, Owen Shephard VK5FORS, John Drew VK5DJ, Ian Bishop VK3FNBL

2012 Field Days

Summer 14/15 January
Winter 23/24 June
Spring 24/25 November (to be confirmed)

Field Day web site: *http://www.wia.org.au/members/contests/vhfuhf/*

This site includes the rules for the next Field Day, rules and results of all past VHF-UHF Field Days, cover sheets and scoring tables, and other information.

Over to you

Hi Peter,

Reading the article on the 6 m Yagi by Paul McMahon VK3DIP he mentions 'Penetrox' which I gather is a electrically conductive grease.

I thought I might let him know that an alternative, 'Alminox' in a 325 g tube, is available on order through Lawrence & Hanson electrical distributors for about $36. Expensive but the tube lasts a long time.

There was no contact details in the article so I thought that you would have contact details and could pass this info on, as well as perhaps a notation in the next *AR*.

Recently we had to repair and refurbish our 20 m Log Yagi at Cataract Scout Park which had been up for many a year and was suffering oxidisation at all the joints of each element. This was done sequentially on each size tube of each element by using different size dowels with a split in the end carrying successively two different grades of emery cloth. Similarly the outside of the next section was cleaned then coated with 'Alminox' before being riveted back together.

Although use of 'Alminox' is messy it appears to do the job of being conductive and importantly staying on each surface. Our 20 m Log Yagi is back in the sky with new feeders that are stronger and more big bird resistant, a (proper) load bearing and a better leverage ratio onto the new rotator through a new mount bracket. We are now showing about 1.25:1 across most of the 20 m band. Importantly we were able to get it back up in time for JOTA.

Let's see if it can stay operative for the next 15 years.

73

Wal Kelly VK2ZWK
Secretary
FGARC

On behalf of our members that made it happen.

VK5news Adelaide Hills Amateur Radio Society (AHARS)

Christine Taylor VK5CTY

A very happy XYL, winner of the AHARS major raffle prize. That's David VK5KC in the background.

November saw the very successful AHARS Buy and Sell on Sunday 20th November which was as well attended as ever. It is the biggest gathering of amateurs in VK5 and often attracts visitors from interstate as well.

This year the WIA President Michael Owen VK3KI came over so the opportunity was taken for a Club's Convention on Saturday 19th. This year it was held at the AHARS new venue 'The Shack' in Blackwood. With the use of the Guide Hall for tea and coffee it all worked very well. The members of AHARS who had worked so hard were rewarded by the admiration expressed by the representatives from the other VK5 clubs. Quite a lot of useful exchange of ideas occurs at these Club's Conventions and this one was no exception.

The months of December and January are usually occupied by Christmas luncheons and family activities. AHARS had a dinner at the Mount Osmond Golf Club that was attended by over 60 members and spouses. As always the ambiance was great and the event was a success. As usual there were a number of happy people after the drawing of all the lucky prize tickets although no one was happier than Rob VK5RG to win a dinner for two at the Golf Club for the second year in a row and the XYL who won the hamper of goodies.

In January AHARS will have the annual picnic at the same venue it has used before, next to the Bridgewater Mill where, as long as the weather is kind, a good time is expected again.

Please note for members and visitors. The meetings of AHARS will be held at a **new venue**. We will meet at the Senior Citizens Hall, 4 Young Street, Blackwood. Meetings are on the third Thursday of each month and start at 7.30 pm. The speaker is always at the beginning of the meeting as it is felt to be more convenient that way. The general meeting is held after the supper break. If you are a visitor to Adelaide and would like to attend a meeting please contact either the President David VK5KC or the Secretary Sue VK5AYL QTHR the callbook.

Other information about the club or its activities can be found on the website *www.ahars.com* from which there are a number of links to associated information.

Spotlight on **SWLing**

Robin L Harwood VK7RH
vk7rh@icqmail.com

2012 has arrived and already I have been noticing that HF is vastly different from what it was just a few months ago. Deutsche Welle in Cologne has largely disappeared although a few remaining programs are being transmitted from Kigali in Rwanda. These are primarily for Africa yet being heard in North America. Radio Netherlands continues but will close during this year with both the relay stations in Madagascar and Bonaire put up for sale or dismantled if no bids are forthcoming.

The BBC World Service also continues but has been severely cut back. Programs no longer originate from Bush House, which is only a few hundred metres from Australia House. I saw it whilst visiting London in 1979, but visits were discouraged due to security concerns. At that time, the IRA was active. Broadcasting commenced from Bush House in 1941 at the height of the London Blitz and at its peak broadcast in over 50 languages. Today there are only 25 or so in use and are mainly news and current affairs. Programs now emanate from Broadcasting House, home of the BBC Domestic Service.

The fiscal crisis in Europe has also affected external services, resulting in reduced programming. Radio France International (RFI) has been plagued by repeated industrial action due to plans to integrate it with the television companies. Employees fear that RFI will lose its individuality if the merger goes ahead. RFI has already scaled back and mainly targets Francophone Africa. Greece is in deep austerity and the Voice of Greece in Athens has dramatically slashed output to six hours a day from 2200 till 0600.

As I have often remarked, the Chinese have been capitalising on the withdrawal of major international broadcasters from HF. It is so easy to hear them now. They have been heavily investing in transmitting infrastructure and one can easily find a Chinese broadcaster virtually around the clock. However the Chinese do not like other external broadcasters airing programs in the various languages within the PRC, going to great lengths to jam them.

Talking of intentional jamming, this came to a head in December following the unexpected demise of the North Korean leader Kim Jong Il, the dictator and referred to as the 'Dear Leader'. As you are aware, there are two Koreas, one in the north and the other in the south and both routinely jam the other's broadcasts. This jamming consists of white noise similar to STANAG and both use it, making it difficult to determine their identity. For example, there is a clandestine station from the north broadcasting to the south on 4450 and the south responds with white noise. Similarly the south has a network of clandestine operations on 6003, 6015, 6518 and 6600. To complicate matters further, the Japanese have commenced airing programs in support of their citizens who were illegally abducted to the north by secret agents. These broadcasts are routinely jammed by the north.

One of the channels chosen in this electronic warfare is 6230, which you may be aware is the frequency of VMC Charleville. This service broadcasts met observations and forecasts for Australia around the clock and is virtually wiped out in the local evening hours by the incessant white noise from North Korea. Similarly the 2011 Sydney to Hobart yacht race radio communications on 6516 were interfered with severely by white noise on 6518, plus a clandestine, presumably in the south. This has gone on for many years now and I wonder why ACMA has not allocated a new channel to get away from this madness.

Incidentally there is another radio war and this does impinge on the amateur bands. Ethiopia and Eritrea have been engaged in a cat and mouse game, jamming each other and usually ending up within the allocation between 7.1 and 7.2 MHz. It is difficult to determine the identity of the signal and they are often heard on 7175, and one will shift up or down to escape the jamming but it seems to follow them. They are often heard as well on 7125 or 7100 usually signing off round 2000.

Afghanistan has now shifted to 7200 from 6102 and is on between 1530 and 1630 reportedly in English. However there are also three other stations co-channel. One is Sudan, another rarity and the remaining stations are Ethiopia and Eritrea in their radio war. What a pity, but also a challenge! Four very rare broadcasters on the same channel simultaneously and, indeed, very difficult identifying who is who.

Well that is all for now. Let us hope that 2012 will produce some surprises. Don't forget that you may email me on the address above.

DX-News & Views

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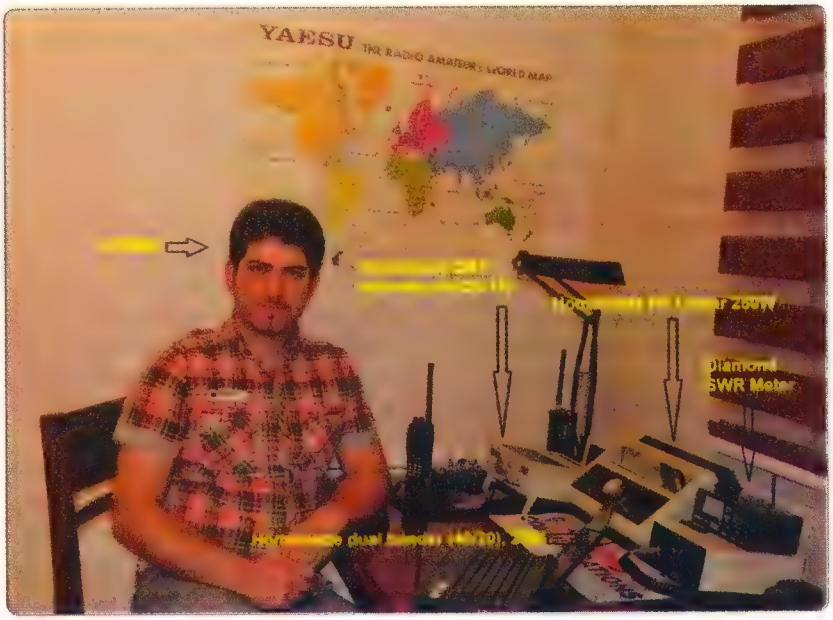
A Happy New Year and let's hope that the rise in the sunspot activity is here to stay for a year or two; it certainly has improved conditions particularly on 24 and 28 MHz.

Well, there certainly is no shortage of DX news this month! But first I must thank Keith VK3FT for his e-mail following my comment on the T32C DXpedition in December, namely 'I speak regularly with Clive GM3POI who was on the DXpedition. As one of the lead designers of the antennas they used on T32C he stated not receiving the Yagis made a big difference as they were forced to use vertical arrays. Clive said that it saved them a lot of time in setting up the antennas and the consensus was that in **not** having the Yagis they made many more contacts than would have been possible if they had used low Yagis.'



Pooyan EP3PK at his modest and mostly homebrew station. The photo captions indicate 'what is what'.

Malpelo 2012 DXpedition

Recently three US members, K4UEE, N4GRN and W6IZT flew to Cartagena, Colombia, and met with six of their Colombian counterparts to make some critical decisions about the upcoming DXpedition to **Malpelo Island**. Since it is highly unlikely that the various Colombian authorities will permit another DXpedition to Malpelo anytime soon, a decision was made to extend the DXpedition to 16-17 days from the previous 12-14 day plan. The approximate dates of operations will now be January 21 to February 5 or 6.

On December 26 four members from the HK0NA team, HK1N, HK1T, HK6F andHK1MW, departed from the pier of the Navy base Bahia Malaga aboard the patrol boat Jose Maria Palas. The target of this advanced team, called 'The Fantastic Four' is to set up all the 11 stations, the two camps and wireless network in order to have all ready when the main group arrive on January 21. To these four brave men who are going to spend more than 40 days on the island and sacrifice the holidays away from their families, we have to express our admiration and gratitude.

Each station will have a complete complement of antennas and radios with amplifiers. The first operating site will be co-located with the Colombian Marine's camp on the east side of the island with a clear take off to the east coast USA, EU and Africa. In order to have a clear shot at JA/Asia, the Pacific region and W6/W7, the second operating site will be located near the top of the highest mountain peak on the island. However, to lessen the physical risks to the team members, the operating site will be located on platforms situated below the actual peak. Still, it will be a 45 minute uphill climb to reach the platforms. The antennas for that site will be on the top of the mountain peak.

This is going to be a difficult and expensive DXpedition. Every effort will be made to maximize QSOs while protecting the safety of the team members. It is a delicate balance. Your financial support is necessary and will be gratefully accepted. Contributions can be made via their website *www.hk0na.com/sponsor* You can read the latest news at *http://hk0na.com/category/latest-news/*

My thanks go to Jorge Prieto HK1R, the DXpedition leader, and co-leaders Bob Allphin K4UEE and Gregg Marco W6IZT. And for those readers who are interested in more information on the history of the Malpelo DXpeditions, an excellent Vienna-based documentary and radio archives communication covers all previous operations to the island - *http://dokufunk.org/malpelo*

Pooyan EP3PK has been active again, at a time suitable for VK/ZL, and often calls CQ VK/ZL, mainly on 20 metres SSB, around 1200 to 1400 UTC. He has an excellent QSL manager and does subscribe to LOTW. He has recently moved QTH but by the time you read this he should be active again in his new surroundings.

The group headed to VP6T, namely F6BEE, G3TXF, VE2TZT, FM5CD and F4BKV have now finalised their itinerary, and will depart on January 12th. First **Tahiti** OC-046 for three days, then **Mangareva Island** OC-063, where they have the callsign TX6T. They may also use that callsign from Tahiti. After Mangareva they hope to reach **Pitcairn** OC-044 by January 20. They will stay on Pitcairn until February 4th. They will have three stations on the air around the clock, 160-10 m, CW, SSB and RTTY with an emphasis on the ' low bands'. QSL direct or via bureau to G3TXF. They will also use ClubLog's Online QSL Request Service, OQRS. Their website is at www.vp6t.org

Some of the members of the 2010 9Q50ON team from the Democratic Republic of Congo are heading to the other Congo - **The Republic of Congo**. They have been issued with the call TN2T and will soon have their website up and running at *http://www.tn2t.be/* Plans are to have six operators and three stations. The time frame for this one is late January and early February. QSL via M0URX.

TN9SN is the new callsign issued to Nicolas Sinieokoff, ex-TN5SN, by the new licensing authority in the **Republic of Congo**. He plans to have it renewed for 2012, as he will be there until July.

Laci HA0NAR has announced a DXpedition to both **Wallis** and **Futuna Islands**. They will stop in Los Angeles for two days before heading to Nadi, **Fiji**. Once in 3D2 they will fly directly to Wallis Island OC-054, where they plan to begin activity as FW0R on January 25. They will have two stations QRV simultaneously on 1.8 through six metres. On February 5 to 10 they will be operating as TW0F from Futuna Island OC- 118. Then on February 11 to February 23 they will be back on Wallis Island. The team is looking for financial support, which can be sent via PayPal to *ha0nar@hotmail.com* 'We would like to thank all individuals and especially the Clubs/Foundations as well as equipment suppliers that already support us,' says Laci. QSL for both FW0R and TW0F via HA0NAR either direct or via bureau. More details can be found at *www.ha0nar.hu*

Myanmar (Burma) has not been QRV since 2004. Over the last year Simon Luttrell HS0ZIB (G6JFY) has been having 'discrete discussions with senior officials within the Myanmar Ministry of Post & Telecommunications, and the Ministry of Tourism.' An 'invitation' has been granted for Simon to visit Bagan, Myanmar 'to operate a PSK31 'micro' DXpedition for about four days. At the time of writing this has not yet taken place but could be a move in the right direction for activity from there.

Starting January 29 through February 10, look for HU2DX to be QRV from **El Salvador** (YS) by a multi-national team from Germany, Czech and El Salvador. This prefix has, supposedly, not been used for close to 30 years. The team will include team leader DL3JJ and YS1GMV, YS1MAE, YS1ZC, OK4MM, DL8ALU, DL2ARD, DL5SE, DL4JS, DK8YY and DF7TT. The main emphasis will be on the low bands and digital modes. QSL via DH7WW.

Adrian EA1CYK is now at the Spanish base Gabriel de Castilla on Deception Island, in the **South Shetlands** AN-010 until March, 2012. He will be QRV as EA1CYK/P in his free time, using an Icom IC-7000 and Yaesu FT-897 running 100 watts on SSB and digital modes into a sloper and vertical. QSL to EA7LS via the bureau or direct.

Mike VE2XB plans to be QRV from **Dominica** NA-101 for several weeks, as J79XB, for a vacation style operation starting January 5. Activity will be on all bands from 1.8 through 28 MHz and possibly six metres. QSL via VE2XB with SAE and either Canadian stamps, two IRCs or greenstamps.

Jim ND9M is back at **Diego Garcia** and QRV as VQ9JC. He is there on a four month rotation on and then four months off, then back for another quarter. Listen for him during his evenings and possibly on Fridays, when he is not on the ship. He operates from the club station using a log periodic for 10 through 30 MHz. Unfortunately the low band antennas are either not working or missing. QSL via ND9M.

Tom Metz K2GSJ says he will be back on **Sint Maarten** from January until about April. QSL to his home call. All the cards will be sent after April 1.

PJ4B on **Bonaire** by PA8A will be from January 8 to 22. QSL via PA3GVI with two greenstamps and SAE.

CX3AN and CX4CR are teaming up to use the call 8Q7HU from Maafushi Island in the Kaafu Atoll of the **Maldives Islands** between January 25 and February 5. They will be on 3.5 through 50 MHz on CW, SSB and RTTY, focusing on South America.

Pai VU2PAI has finished installing his new topband dipole from the top of his apartment in Mangalore, **India,** using a 15 metre high spider pole, which puts the antenna at 46 metres above the ground. He has also replied to all direct QSL requests. When sending QSL requests to Pai he requests 'three or four' beautiful stamps on the envelope to him. No need to send a greenstamp, but please include SAE. He still has QSL cards for his previous AS-096 and AS-161 IOTA operations, as well as VU2PAI/50 and VU2PAI/C. Pai does use LoTW, but prefers QSLs.

A note on JE1LET's QRZ.COM page says 'If you need a **VK0KEV** QSL card, please send me your request by 31 January, 2012'. Given the lateness of the day, it may well be prudent to email Masa, at *JE1LET@jarl.com* with your request and QSO details.

Good luck in the pile-ups until next month.

Special thanks to the authors of *The Daily DX (W3UR, 425 DX News (I1JQJ) and QRZ.DX* for information appearing in this month's DX News & Views. For interested readers you can obtain from W3UR a free two-week trial of The Daily DX from *www.dailydx.com/trial.htm*

AMSAT

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And then there were three (and a half)...

It was announced on 29 November that AO-51's third battery cell had failed and so its mission had ended. After nearly six and a half years of service, the most popular OSCAR had succumbed to the ravages of its environment. It is with regret that I have to remove AO-51 from the six monthly listing below. Of the operational OSCARs only AO-7, SO-50, and VO-52 have working transponders; I left ARISSat-1 out of this group as it may have re-entered by the time you read this. FO-29 is currently non-operational but is very likely to recover when eclipses improve.

2011 in review

There have been some significant losses this year. HO-68 was unlikely to activate its transponders and has remained in beacon mode. FO-29 has started another long eclipse season and is currently silent though it is likely to come back at some stage. Latest news is that the command station has been repaired and FO-29 was re-activated. Unfortunately it shut down after only four minutes from under-voltage. SO-67 has suffered many problems that have reduced the amount of amateur usage. NO-44 is also undergoing recovery attempts. Of the cubesats, RAX-1 mission has ended, and the SWISSCUBE mission has ended but its future is unknown.

But there have been some gains. ARISSat-1 has been a huge success despite the incident with the 70 cm antenna. Several cubesats were successfully launched and are still operational. FO-69 has been successfully used for APRS digipeating.

Six-monthly review of operational OSCARs

Here is an updated review of the operational OSCARs and other satellites using amateur satellite service bands. All satellites listed here have been heard by the author during November and December, 2011 except FO-29, NO-44, DO-64 and SO-67.

The names of the satellites are given as OSCAR number, full name and (NASA catalogue number). Modes are represented by frequency bands: H=10 m, V=2 m, U=70 cm, L=23 cm, in order of uplink/downlink.

Linear transponders use CW and SSB. With the exception of AO-7's V/H transponder, all linear transponders are 'inverting' types and use LSB for the uplink and USB on the downlink. For AO-7 mode V/H use USB for both links. Most of the activity is in the middle of the passband. If manually adjusting for Doppler then the most compensation should be done with the highest band in use. Foundation licensees are permitted to transmit SSB/CW and FM voice to any of the satellites in the 10 m, 2 m and 70 cm bands as well as receive all the satellites. Foundation licensees are not permitted to use 23 cm uplinks, for example CO-65. See the AMSAT column in September, 2009 AR for more details.

Telemetry decoding programs for several satellites are available from Mike Rupprecht's website at *http://www.dk3wn.info/software.shtml*

AO-7 AMSAT OSCAR 7 (7530)

Launched: 15/11/1974.
Status: Operational only when it is in sunlight. It may be in any mode. During non-eclipse periods as it is currently, AO-7 will alternate between modes V/H and U/V every 24 hours. Beacons are not always on.
Mode: V/H (old mode 'A'), linear, non-inverting.
Uplink: 145.850-145.950 MHz, Downlink: 29.400-29.500 MHz.
Beacon: 29.502 MHz CW. Occasionally the 435.106 MHz CW or RTTY beacon may be on.
Mode: U/V (old mode 'B'), linear, inverting.
Uplink: 432.125-432.175 MHz, Downlink: 145.975-145.925 MHz.
Beacon: 145.972 MHz CW at 10 or 20 WPM, intermittent operation.

Unfortunately the AO-7 website has been corrupted. Reports are sent to *http://oscar.dcarr.org* to indicate which modes have been heard.

UO-11 UOSAT-2 (14781)

Launched: 1/3/1984.
Status: Intermittent. UO-11's 145.826 MHz beacon will only work when in full sunlight. You may hear its distinctive signal while monitoring the frequency for other satellites such as ISS, NO-44 and FO-70.
Beacon: 145.826 MHz FM 1k2 AFSK.
http://www.g3cwv.co.uk/oscar11.htm

IO-26 ITAMSAT (22826)

Launched: 26/09/1993.
Status: Semi-operational. IO-26 is in Master Boot Loader (MBL) mode. It transmits continuous BPSK carrier with the occasional telemetry packet.
Beacon: 435.790 MHz 1k2 BPSK (Note: this has shifted from the original published frequency)

http://www.amsat.dk/oz7sat/tlm/view.php?sat=io26

FO-29 FUJI-OSCAR 29 JAS-2 (24278)

Launched: 17/8/1996.
Status: Semi-operational as linear transponder. Most activity is around 435.850 MHz. The BBS and digipeater operation have not been used since 2003. FO-29 fell silent in October, 2011due to long eclipse periods and low battery voltage, but is likely to recover when the eclipses reduce.
Mode: V/U linear, inverting.
Uplink: 145.900-146.000 MHz, Downlink 435.900-435.800 MHz.
Beacon: 435.795 MHz CW telemetry.

http://www.ne.jp/asahi/hamradio/je9pel/index.htm

http://tinyurl.com/FO29Blog

NO-44 PCSAT (26931)

Launched: 30/9/2001.
Status: Operational only in full sunlight. One solar panel and the batteries are not functioning.
Mode: V/V 1k2 AFSK packet digipeater.
Uplink: 145.827 MHz, Downlink 145.827 MHz.

http://pcsat.aprs.org

SO-50 SAUDISAT-1C (27607)

Launched: 20/12/2002.
Status: Operational. SO-50 has a sensitive receiver and a transmit power of only 250 mW.
Mode: V/U FM voice with 67 Hz CTCSS tone.

Uplink: 145.850 MHz, Downlink 436.795 MHz (but may switch to 436.790 MHz).

To switch the transmitter on you need to send a few seconds of 74.4 Hz CTCSS tone.

The order of operation is thus (allow for Doppler as necessary):

1) Transmit on 145.850 MHz with a tone of 74.4 Hz to arm the 10 minute timer on board the spacecraft.
2) Now transmit on 145.850 MHz FM voice using a 67 Hz CTCSS tone to access the transponder.
3) Sending the 74.4 Hz tone again within the 10 minute window will reset the timer.

VO-52 HAMSAT (28650)

Launched: 5/5/2005.
Status: Operational. VO-52 has two linear transponders that use nearly the same passbands. The Indian transponder is normally on. Most activity is around 145.900 MHz. AMSAT-India have requested that FM is not used through either transponder.
Mode: U/V linear inverting.
Indian transponder:
Uplink: 435.220-435.280 MHz, Downlink 145.930-145.870 MHz.
Beacon: 145.936 MHz continuous carrier.
Dutch transponder:
Uplink: 435.225-435.275 MHz, Downlink 145.925-145.875 MHz.
Beacon: 145.860 MHz CW 12 WPM preset message.

http://www.amsatindia.org

The following are mainly Cubesats. Reception reports are often well received and can result in a QSL card for your efforts. See websites for details.

CO-55 CUTE-1 (27844)

Launched: 30/6/2003.
Status: Operational. From the first cubesat launch CO-55 continues to send CW telemetry though the beacon now has an additional carrier.
Beacon: 436.8375 MHz CW telemetry.

http://lss.mes.titech.ac.jp/ssp/cubesat/index_e.html

CO-57 Xi-IV (27848)

Launched: 30/6/2003.
Status: Operational. From the first cubesat launch, CO-57 continues to send CW telemetry. It also has an on-board camera. Pictures of the Earth can be found on the website below.
Beacon: 436.8475 MHz CW telemetry

http://www.space.t.u-tokyo.ac.jp/gs/en/index.aspx

CO-58 Xi-V (28895)

Launched: 27/10/2005.
Status: Operational. CO-58 has an on-board camera. Pictures of the Earth can be found on the website below.
Beacon: 437.465 MHz CW telemetry.

http://www.space.t.u-tokyo.ac.jp/gs/en/index.aspx

DO-64 Delfi-C3 (32789)

Launched: 28/4/2008.
Status: Semi-operational. The linear transponder has failed. The control team switched DO-64 back to science mode on 29/1/2009. Often by the time it has reached VK/ZL the transmitter has stopped, so it will be heard here occasionally. If they change it to basic mode then the telemetry will be heard over VK/ZL on most passes. The telemetry can be demodulated and decoded using software from the Delfi website.
Beacon: 145.870 MHz (primary) or 145.930 MHz (secondary) 1k2 BPSK telemetry.

http://www.delfic3.nl/index.php

CO-65 CUTE-1.7+APDII (32785)

Launched: 28/4/2008.
Status: Operational. The CW beacon is on continuously. The mode L/U APRS digipeater has been activated during weekends using 9k6 GMSK modulation. Unproto via JQ1YTC.
Mode: L/U 9k6 GMSK.
Uplink: 1267.602 MHz, Downlink 437.475 MHz.
Beacon: 437.275 MHz CW telemetry.

http://lss.mes.titech.ac.jp/ssp/cute1.7/index_e.html

CO-66 SEEDS II (32791)

Launched: 28/4/2008
Status: Operational. CO-66 is a cubesat that transmits CW telemetry, packet telemetry and a pre-recorded message of voice and SSTV. Sometimes all three can be heard during a pass over VK/ZL as it changes modes. At 450 mW output, CO-66 has the strongest signal of the cubesats.
Beacon: 437.385 MHz CW telemetry, 1k2 AFSK packet and FM Digitalker/SSTV.

http://cubesat.aero.cst.nihon-u.ac.jp/english/main_e.html

SO-67 SumbandilaSat (35870)

Launched: 17/9/2009.
Status: Intermittent. SO-67 has had a series of malfunctions though the amateur payload is reportedly in good shape. Its high powered transmitter (five watts) is easily heard. There is a three second tail after each transmission, so pause before transmitting to the satellite. Keep your overs brief as there is also a cut-out timer. For best results set your radio to narrow FM or turn down the microphone gain if your transmitter allows. SO-67 is scheduled for use over a different area each week. For VK/ZL it is usually during the last week of the month. Keep an eye on the AMSAT-SA website at *http://www.amsatsa.org.za/* for the latest news.
Mode: V/U FM voice.
Uplink: 145.875 MHz with 233.6Hz CTCSS, Downlink 435.345 MHz.

HO-68 XW-1 CAMSAT (36122)

Launched: 15/12/2009.
Status: Semi-operational. A faulty antenna relay is stopping use of the transponders but the beacon is operating continuously. The website has also gone offline.
Beacon: 435.790 MHz CW telemetry.

FO-69 FASTRAC 1 (37227)

Launched: 20/11/2010.
Known as 'Sara Lily'. FO-69 and FO-70 are a dual system to explore inter-satellite communications. APRS packet experiments have been successful using the 145.825 MHz uplink at 1200 baud.
Mode: V/U FM PACKET.
Uplink: 145.980 MHz 1k2 AFSK, 145.825 MHz 9k6, Downlink: 435.345 MHz.

FO-70 FASTRAC 2 (37380)

Launched: 20/11/2010.
Known as 'Emma'.
Mode: U/V FM PACKET.
Uplink: 435.025 MHz 1k2 AFSK, 437.345 MHz 9k6, Downlink: 145.825 MHz.

http://fastrac.ae.utexas.edu/our_project/overview.php

AO-71 AUBIESAT-1 (37854)

Launched: 28/10/2011.
AUBIESAT-1 is a cubesat from the Auburn University of Alabama. Its mission experiments are radio wave propagation and protective films for solar panels.
Downlink: 437.475 MHz 20 wpm CW.

http://www.space.auburn.edu/index.htm

RS-series satellites

RS-15 RADIO ROSTO (23439)

Launched: 26/12/1994.
Status: intermittent. The beacon only comes on when satellite is in full sunlight, and is not on every pass.
Beacon: 29.352 MHz on/off carrier.

RS-30 YUBILEINY (32953)

Launched: 23/5/2008.
Status: Operational. Only the CW beacon has been heard over VK/ZL. Other transmission types are heard when it is in range of the control stations in Russia.
Beacon: 435.315 MHz (primary), 435.215 MHz (secondary) CW telemetry.

http://www.dk3wn.info/sat/afu/sat_rs30.shtml

Other satellites using amateur frequencies.

ISS (25544)

Launched: 20/11/1998.
Status: Operational. The International Space Station has an amateur radio station that operates in many modes. Ultimately it depends on the manned crew's activities. Voice, digital, and SSTV modes are used. Sometimes experimental modes are tried; one example was a 23 cm FM repeater uplink on 1269.650 MHz.

Mode: U/V crossband FM repeater.
Uplink: 437.800 MHz FM, Downlink 145.800 MHz.
Mode: V/V Digital / APRS 1k2 AFSK FM.
Uplink: 145.825 MHz, Downlink: 145.825 MHz.
Mode: V/V FM Voice, SSTV.
Uplink: (Region 1) 145.200 MHz, (Region 2/3) 144.490 MHz, Downlink: 145.800 MHz

http://www.issfanclub.com/
http://www.rac.ca/ariss/

COMPASS-1 (32787)

Launched: 28/4/2008.
Status: Operational. Compass-1 has a chirpy CW telemetry beacon that is normally sent every three minutes. If battery voltage is low it will send every eight minutes. COMPASS-1 can be commanded by any amateur to send telemetry on demand using DTMF codes, though the satellite may not give a response each time. Every command will give a confirmation beep on 437.275 MHz.
**35## - request a test beacon CW.
**36## - request a test packet 1k2 AFSK FM (UI-Frame).
**60## - request a housekeeping frame in 1k2 AFSK FM (KISS frame).
Mode: V/U DTMF command, 1k2 AFSK.
Command: 145.980 MHz, Downlink 437.405 MHz.
Beacon: 437.250 MHz CW telemetry.

http://www.cubesat.de

STARS (33498)

Launched: 23/1/2009.
Status: Operational. STARS is two satellites tethered together. Both 'Mother' and 'Daughter' have CW and 1k2 AFSK packet telemetry on 70 cm. The CW beacon of 'Mother' is on continuously, but 'Daughter' is weaker and intermittent.
Beacon: Mother 437.485 MHz, Daughter 437.465 MHz FM 1k2 AFSK.
Beacon: Mother 437.305 MHz, Daughter: 437.273 MHz CW telemetry.

http://stars1.eng.kagawa-u.ac.jp/english/index.html

PRISM (33493)

Launched: 23/1/2009.
Status: Operational. Following from the success of CO-57 and CO-58, the University of Tokyo built PRISM to carry a larger camera with a telephoto lens. The packet downlink is only available over the command stations in Japan, though the CW beacon is on world-wide. PRISM also has an uplink channel but frequency and modulation details have not been published yet. A test was made for amateurs during May, 2011 but no news since.
Mode: -/U 1k2 AFSK or 9k6 GMSK.
Downlink: 437.425 MHz.
Beacon: 437.250 MHz CW telemetry.

http://www.space.t.u-tokyo.ac.jp/prism/en/main.html

KKS-1 (33499)

Launched: 23/1/2009.
Status: Operational. KKS-1 transmits a series of messages on its CW beacon.
Beacon: 437.385 MHz CW message.

http://www.kouku-k.ac.jp/~kks-1/kks-gs-top-e.htm

SWISSCUBE (35932)

Launched: 23/9/2009.
Status: Operational. Transmits CW telemetry with frames every 30 seconds. Decoding software is available at their website. SWISSCUBE's mission had ended and will now be under control of two amateur stations in Europe.
Beacon: 437.505 MHz CW telemetry.

http://swisscube.epfl.ch

ITUpSAT (35935)

Launched: 23/9/2009.
Status: Operational. This Turkish cubesat transmits a frame of CW every three minutes giving its name and callsign.
Beacon: 437.325 MHz CW message.

AMSAT-VK

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About AMSAT-VK

AMSAT-VK is a group of Australian amateur radio operators who share a common interest in building, launching and communicating with each other through non-commercial Amateur Radio satellites. Many of our members also have an interest in other space based communications, including listening to and communicating with the International Space Station, Earth-Moon-Earth (EME), monitoring weather (WX) satellites and other spacecraft.
AMSAT-VK is the primary point of contact for those interested in becoming involved in amateur radio satellite operations. If you are interested in learning more about satellite operations or just wish to become a member of AMSAT-Australia, please see our website.

AMSAT-VK monthly net
Australian National Satellite net

The net takes place on the second Tuesday of each month at 8.30 pm eastern time, that is 0930 Z or 1030 Z depending on daylight saving. The AMSAT-VK net has been running for many years with the aim of allowing amateur radio operators who are operating or have an interest in working in the satellite mode, to make contact with others in order to share their experiences and to catch up on pertinent news. The format also facilitates other aspects like making 'skeds' and for a general 'off-bird' chat. In addition to the EchoLink conference, the net will also be available via RF on the following repeaters and links.

In New South Wales
VK2RMP Maddens Plains repeater:146.850 MHz
VK2RIS Saddleback repeater: 146.975 MHz
VK2RBT Mt Boyne Repeater on 146.675 MHz

In Queensland
VK4RIL Laidley repeater on 147.700 MHz
VK4RRC Redcliffe 146.925 MHz IRLP node 6404, EchoLink node 44666

In South Australia
VK5TRM, Loxton on 147.125 MHz
VK5RSC, Mt Terrible on 439.825 MHz IRLP node 6278, Echolink node 399996

In Tasmania
VK7RTV Gawler 6 m. Repeater 53.775 MHz IRLP node 6124
VK7RTV Gawler 2 m. Repeater 146.775 MHz. IRLP node 6616

In the Northern Territory
VK8MA Katherine 146.700 MHz FM

Operators may join the net via the above repeaters or by connecting to EchoLink on either the AMSAT-NA or VK3JED conferences. The net is also available via IRLP reflector number 9558. We are keen to have the net carried by other EchoLink or IRLP enabled repeaters and links in order to improve coverage. If you are interested in carrying our net on your system, please contact Paul via email. Frequencies and nodes can change without much notice. Details are put on the AMSAT-VK group site.

Become involved

Amateur satellite operating is one of the most interesting and rewarding modes in our hobby. The birds are relatively easy to access and require very little hardware investment to get started. You can gain access to the FM 'repeaters in the sky' with just a dual band handheld operating on 2 m and 70 cm. These easy-to-use and popular FM satellites will give hams national communications and handheld access into New Zealand at various times through the day and night.
Should you wish to join AMSAT-VK, details are available on the web site or sign-up at our group site as above. Membership is free and you will be made very welcome.

Tlsat-1 (36799)

Launched: 12/7/2010.
Status: Operational. Tlsat-1 is the first Swiss student-built satellite. Its mission is to test various materials exposed to atomic oxygen at low Earth orbit.
Downlink: 145.980 MHz FM FSK, CW.
Beacon: 437.305 MHz CW at varying speeds.

http://www.spacelab.dti.supsi.ch/tiSat1MS.php

SRMSAT (37841)

Launched: 12/10/2011.
Status: Operational. SRMSAT is a 10 kg nanosatellite built by SRM University in India. Its mission is to monitor greenhouse gasses.
Downlink: 437.425 MHz CW telemetry.
http://srmsat.in

HRBE (37855)

Launched: 28/10/2011.
Status: Operational. The Hiscock Radiation Belt Explorer (formally known as E1P, Explorer one prime) is a cubesat developed at the University of Montana. Its mission is to measure the lower Van Allen radiation belt similar to the original Explorer One. HRBE has a strong signal and should be easy to decode.
Downlink: 437.505 MHz 1200 baud AFSK.

http://ssel.montana.edu/e1p/

Final pass

Like many others I would like to thank the control team of AO-51 for their efforts in keeping it alive. After the first two batteries failed they managed to squeeze another year or more of operation. From a personal point of view it would come as no surprise to regular readers that most of my time on AO-51 was spent using mode V/S. Though looking through the log I did make contacts on V/U and L/U. Vale AO-51 and looking forward to the Vega launch, FunCube and UKcube-1 in 2012.

Silent Key Kurt Postler VK5KI

22 January 1929 – 15 November 2011

Kurt immigrated to Australia from Germany after WW2. He had achieved a high level of craftsmanship in fine engineering machine work in his home country. but was initially employed as a fireman on the Peterborough SA railway line. In breaks between shoveling coal, he would study his radio handbooks, and eventually obtained his First Class Commercial Radio Operators Certificate.

This followed with some time as a Radio Operator on cargo vessels on the Australian coast, and as an Engineer at Broadcast Stations in Adelaide and Port Augusta.

In 1963 he commenced work as an Inspector in the Postmaster General's Department specialising initially in field work on Radio, Television and Radiocommunications Interference.

Following success at higher Departmental study, Kurt became fully occupied in establishing the Adelaide Type Testing Laboratory, where local manufacturers submitted their Radio Equipment for approval, and subsequent licensing, under the Wireless Telegraphy and later Radiocommunications Acts. With the compulsory introduction of Single Sideband Suppressed Carrier systems into the Land Mobile Service, Kurt liaised with PMG headquarters and local manufacturers to establish the RB209 SSB Standard, that is still relevant today.

He was subsequently involved in the acceptance tests and inspection of Royal Flying Doctor Service, base changeovers to SSB, at a number of sites, throughout Australia.

In his later employment in the Department (then renamed Department of Communications and later ACMA) he was responsible for the Regulatory and Technical functions of the office in South Australia.

Kurt enjoyed his hobbies. He was an amateur radio operator, using both Telephony and Morse Code, and a member of the Wireless Institute of Australia, and his local North East Radio Club.

He also enjoyed participating in marathon races, and performing in the 'Masters Games" when he became eligible to enter those activities.

He could also frequently be seen floating and controlling his model boats on the ponds in the Adelaide park lands, where he attracted large crowds on some Saturday afternoons.

In retirement he continued to enjoy his hobbies, however became a full time carer for his wife Mary, prior to her unfortunate death. His own health declined in the last two years, and he spent his last days in a suburban nursing home.

His radio equipment was kindly donated to the North East Radio Club, for use in their education programme.

Prepared by Rob Gurr VK5RG, with the assistance of other workmates and friends.

VK7news

Justin Giles-Clark VK7TW
Email: vk7tw@wia.org.au

Sewing Circle Net Meet the Voice BBQ

Sunday March 18, 2012 is the date set for the annual Sewing Circle Net 'Meet the Voice BBQ' at picturesque Ross in the midlands of Tasmania. A feature of this year's BBQ will be an auction of amateur radio equipment with all proceeds going toward the repeater network in VK7. If you would like more information about this BBQ then please join the nightly Sewing Circle Net which is held from 5.00-6.00 pm local on 3.590 MHz.

VK7 Regional News Broadcasts

A big thank you to both Harry VK7AR and Jack VK7IL who are having a well-earned rest from rebroadcasting on 14.130 MHz. Harry mentioned he has been doing it for well over 22 years. Also, thanks to Gavin VK7HGO and Clayton VK7ZCR, who were our UHF CB rebroadcasters for many years. If you listen to the VK7 Regional News broadcast on a repeater in VK7 and have HF re-broadcasting capability and would be prepared to undertake a rebroadcast once a month then the author would love to hear from you. We even have designs for patch boxes. You can contact Justin at the email above or call him on 0439 016 622.

Northern Tasmania Amateur Radio Club

Congratulations to Brendan VK7FESQ for successfully gaining his Foundation licence, and NTARC also welcomes Lewis VK3FLPL who has recently moved to VK7. December 14, 2011 was the annual end of year gathering at Myrtle Park with about 20 members and partners gathering for a social BBQ and, of course, the slippery trout contest which was awarded to Joe VK7JG for a nice brook trout. Thanks to Max VK7KY who donated a beautiful Huon pine 'priest' as a raffle prize. The Annual General Meeting for NTARC will take place on 8 February, 2012 at the Skills Institute, Alanvale, commencing at 7.30 pm.

Photo 1: Equine endurance event communications checkpoint. Photo by Dave Lees.

Cradle Coast Amateur Radio Club

On February 26, 2012 the CCARC has been asked to provide radio coverage for a new bicycle event, The Pure Tasmania Cycle Challenge. This gruelling event starts at 6.00 am in Devonport, travels though Sheffield to Cradle Mountain Lodge for lunch, then continues west through Rosebery and Zeehan and finishes in Strahan by 7.00 pm. If you are interested in helping out with the communications for this event then please email David VK7DC at *ccarc.inc@gmail.com*

North West Tasmanian ATV Group

The Annual General Meeting of NWTATV Group will be on 4 February, 2012 and members are reminded that renewal of membership falls due on 1 January, 2012. There will be a general meeting following the AGM.

WICEN Tasmania (South)

The weekend of 26/27 November, 2011 saw about 30 amateurs and friends gather at St Helens to support the state championships of the Tasmanian

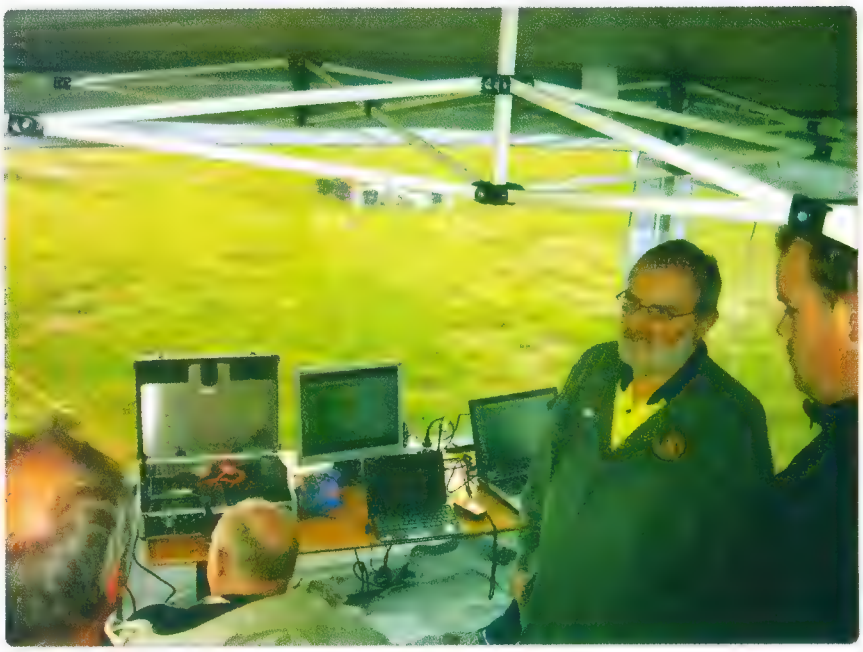


Photo 2: Equine endurance event base. Photo by David Cleland VK7DC.

Equine Endurance Riding Association and thanks to Roger VK7ARN for the information in this report. The checkpoint and communications group was made up of members of WICEN (South) assisted by the Cradle Coast ARC, Northern Tasmania ARC, and the Land Rover Owners Club of Tasmania. Seven teams covered base and six checkpoint locations, which included 13 checkpoints. In the 24 hours there was 68 mm of rain which presented some challenges for crews. A special thank you goes to David VK7DC for organising the testing and tagging of mains power equipment at very short notice. This was a great training exercise for this year's National Tom Quilty Endurance ride to be held in St Helens in June.

Radio and Electronics Association of Southern Tasmania

We welcome four new Foundation licence holders who are our WIA sponsored scholarship recipients from Newtown High School, Matt VK7FAAA, Brendan VK7FADD, Aleksanders VK7FAAE and Jacob. If you are interested in mentoring these guys then please let the Secretary know at email: *secretary@reast.asn.au* We hope to hear these guys on the air soon.

The DATV nights continued throughout the Christmas and New Year break with a broad range of material being presented. This included miniature valves including gas-filled photocells, photometry using DSLR cameras, Morse keys, software defined radio, home brewing, crystal holders, and ARDF receivers. Our video presentations included the 8th Region 3 ARDF Championships held at Maldon in 2011, and thanks to Jack VK3WWW for the DVDs. There was also the BS7H Scarborough Reef and 1997 VK0IR DXpeditions from James Brooks 9V1YC. You can see us on *http://batc.tv/ch_live.php?ch=5* – members stream – VK7OTC on a Wednesday night from 7.30 pm AEDST.

Note: Regional News Website: *groups.yahoo.com/group/vk7regionalnews/*

Silent Key Vic Kitney, VK6VK/VK7VK/VK0VK

Many Tasmanians would have fond memories of Vic. There is a wonderful tribute that can be found at the web link. It is well worth a read - *http://watvhistory.com/2011/12/vic-kitney-tribute/*

Vic lived in Tasmania in the 1980s and married Maida Klein. Mike VK7FB and Gavin VK7WT helped Maida keep in touch with Vic while he was in Antarctica.

Sadly Maida passed away and Vic moved up to the Swansea area for a time, and then back to VK6. He will be sorely missed by those fortunate enough to have known him.

Vale Vic.

Contributed by Mike VK7FB and Gavin VK7WT.

Silent Key Dietmar Schoenfeld, VK7FDIE

It is with sadness that we report the death of Dietmar VK7FDIE on the night of Sunday 18 December, 2011. Dietmar was 69 years old and suffered poor health over the last few years with diabetes and heart trouble, and died from a heart attack.

As southern VK7 amateurs will certainly know, Dietmar was one of the characters on the repeater and was always listening to the repeater and other frequencies and was not afraid to make a comment or three... HI.

Some amateurs were fortunate enough to have spoken with Dietmar on the Sunday morning after the broadcast. He would regularly call back to the broadcast and visit the Wednesday afternoon group although this had tapered off in recent times. We will certainly miss Dietmar on the repeater.

Vale Dietmar.

Contributed by Chris VK7FCDW, Mike VK7FB and Justin VK7TW.

Silent Key Mike Park ex VK3ASH

It is with great sadness that I inform you of the death of my brother Mike Park on 6th October 2011.

Mike was the former holder of the call sign VK3ASH and was an avid amateur radio enthusiast from an early age. He spent many happy hours communicating with people all over the world. He started a amateur radio club whilst a student at Caulfield Grammar School in the 1950s and 60s.

He was secretary of WIA from 1973 to 1975.

After studying Communications Engineering at RMIT, he worked for a number of companies including Phillips, Ericsson and Motorola. Eventually his interests turned to computers and he became an IT consultant.

He is survived by his wife Sharon, three sons and a daughter.

Lynne Guala (nee Park)

VHF/UHF - An Expanding World

David Smith VK3HZ
vk3hz@wia.org.au

Weak Signal

Welcome back from the break.

This month, we are covering two months of activities, November and December. Normally, this is a busy time of year for the VHF/UHF enthusiast. However, things were looking decidedly flat up until the last days of the year prompting speculation that the breaking of the drought, or the turning of the sunspot cycle had chased the good conditions away. Then things turned, and the final days of 2011 largely made up for the quiet times.

The early days of November saw a continuation of the good conditions between VK2/4 and ZL. On 7/11, Adrian VK4OX worked Bob ZL3TY on 2 m with 5x3 reports over the 2407 km path. John VK4JMC also worked Bob. On 16/11, Adrian again worked Bob ZL3TY and also ZL1AVZ on 2 m.

On the morning of 15/11, Adrian VK4OX worked up the coast on 70 cm to Ian VK4AFC – up to 5x7 over 1300 km - and John VK4FNQ (5x5 over 1000 km).

On 24/11, conditions across the Bight were in good form. Wally VK6WG in Albany on 2 m worked Phil VK5AKK (5x9), Brian VK5BC (5x9) and Bill VK5ACY (5x5). Wally also worked Phil (5x9) and Brian (5x5) on 70 cm.

Nothing much of any note then happened until after Christmas day.

On the morning of 28/12, the VK6REP 2 m beacon was heard in Melbourne. As well, the VK7RAE 2 m and 70 cm beacons were heard in Adelaide, 970 km away. That evening, the VK6REP 2 m beacon returned to the east with a vengeance. Norm VK7AC (2365 km) reported it as 5x4, 5x1 for Jim VK3ZYC in east Gippsland (2320 km), 30 over 9 for Nick VK3VFO/P in central Gippsland (2265 km) and many reports from the Melbourne area. However, for all that, nobody was on at the VK6 end, so no contacts resulted. The following morning (29/11), the VK6REP beacon was still in and this time Ron VK6VOX at Katanning worked Jim VK3II (2560 km), Andrew VK3OER and Ian VK3AXH. That evening, Wally VK6WG worked Jim VK3II and Phil VK5AKK on 2 m. Wally also worked Phil on 70 cm (5x9) and 23 cm (5x7) – a distance of nearly 1900 km. The middle of the day on December 30th saw an Es opening from VK2 to VK4 with distances of 1250 km to 1850 km.

And so we come to the final day of 2011 and the Es god turned on a blinder. From about 0130Z to 0530Z, 2 m was open every which way with contacts from VK5 to VK1/2/4, VK3 to VK4, VK2 to FK8 and ZL. There were dogpiles on 144.1 and it was sometimes difficult to find a clear frequency to QSY.

The map on Figure 1 from the VKLogger shows the extent of the opening.

It was good to hear at least two F calls in the fray, Peter VK4FPFH at Hervey Bay and Nick VK4FMAG on Magnetic Island. Nick possibly took out the longest distance Es contact for the day working Lou VK3ALB over 2122 km.

Adrian VK4OX (the second of 17 stations I worked) had this to say about it:

The 144MHz Sporadic E (Es) season had been very poor so far with only a minor opening to VK5 on 27/12/2011 for about 25 minutes for me, and the odd opening for VK2 up to north Queensland.

Then THE event occurred. Things looked promising from 0000Z on New Year's Eve. I was copying short skip six metre beacons from all over the place. When this happens, the usual problem on 144MHz for me is, 'Where to point the Beam?'

This year, I had bought an old Watkins Johnson VHF/UHF surveillance receiver covering 88 MHz to 260 MHz on one band and 230 MHz to 500 MHz on another. This Rx has a very useful Panadaptor which can span about three MHz of the spectrum, +/-1.5 MHz from the received centre frequency. I built an 88 MHz to 260 MHz log periodic antenna. The 88MHz to 108MHz FM band is chokka here and finding DX stations is just too much trouble so I began looking at the 112 MHz-118 MHz VOR beacon band.

Figure 1: The two metre Es Contacts - 31/12/11 from 0130Z to 0530Z.

At about 0115Z I began 'seeing' DPO, the Devonport VOR beacon on 116.3 MHz in QE38. Then at 0128Z I worked VK3PY. Nothing for 20 minutes, then all hell broke loose. The band was then open until 0539Z, when the last VK5 was heard.

Summary: 32 VK3s, 8 VK5s, 1 VK2 and 2 FK8s. Grids worked QF02, QF03, QF12, QF15, QF21, QF22, QF23, QF31, QF43, PF85, PF94, PF95 and RG37. Interesting VORs heard: DPO in QE38; BOR in QF03; WJS in QF44; NAR in QF35; WG in QF34; MTP in PF95; LEC in PF99; MCO in QF42; CWS in QF21; LVG in QF32; NHL in QF03; MIA in QF15. There were probably many others but I was busy working stations. The Panadaptor proved very useful, as I could watch the display for signals while working the DX. An unforgettable opening.

Gavin VK3HY, a veteran of VHF, had this to say:

Lots of 144 MHz QSOs ranging from northern NSW to Charters Towers in FNQ. This was the longest 144 MHz Es opening I have experienced. I managed to add two new grid squares bringing my modest tally up to 52. I reckon QSO of the day might go to Perrin VK3XPT who worked VK4FNQ at Charters Towers on 144.130 MHz using an FT-817 and a hand held 4-element Yagi in his back yard. 5x1 reports were exchanged just before his 'Armstrong antenna mount' and FT-817 battery both lost power.

Barry VK3BJM also managed a good tally:

Just after 0215Z I was 'encouraged' to go outside and check that the fire-pumps were working OK – so naturally I dived into the shack to grab my sunglasses (there was a lot of sun about). I noticed there were voices coming from the radio, a lot of voices, VK4-type voices. Between 0219Zand 0238Z I worked seven VK4s, six from QG62 and Adrian VK4OX, in QG63. I reluctantly paused and went to play with the pumps. Returning at 0345Z it was apparent that things were still running hot, but the footprint had spread a bit, and in the next 25 minutes I worked VK4UH in QG62, VK4BLK in Yeppoon (QG56), VK4FNQ in Charters Towers (QG39), VK4FPFH in Hervey Bay (QG64), and VK4VN in QG62. I left the shack again, returning just after 0500Z to work Ron VK4BRG in Bundaberg.

At 0428Z I noted hearing Colin VK5DK at 52 on backscatter, calling/working a VK4, who I could also hear at a similar RS (I foolishly didn't note the call of the VK4). John VK4FNQ reminded me that we last worked in 2006, so it's been a while since I had the luck to be home during an Es event.

In all, 13 VK4s worked, with the bonus of an addition of four new grid locators to my personal tally. I'd not worked into the Brisbane area on 2 m before. VK4FNQ was the most distant station worked, at 1917 km. The nearest was Dennis VK4ACE, at 1321 km. I also noted failing to complete contacts with VK4BKP, VK4VFO and VK4KR, with potentially another two new grid locators in that group. It was really good to see so many stations calling and then immediately QSYing to a nominated frequency for completion of the contact. Frankly it made finding new stations to work a breeze – just take the VFO for a spin up and down the band! Only one of my 13 contacts was carried out on 144.100, which was always busy but was not unusable. It was just nice to have been home at the time of such an event – for a change!

Bob ZL3TY missed the Es opening, but received some spectacular compensation:

After a day out yesterday I arrived home and checked into the VKlogger to find the aftermath of the huge Es opening in VK. Checked two metres and found nil so left the receiver on 138.276 MHz, the Channel 5A carrier from Newcastle. At about 5 pm local time it started to lift out of the noise and a couple of hours later it was up to S3. The carrier was steady so it was apparently tropo, not Es.

Started calling on 144.1 and at 0658Z worked Steve VK2ZT 53/53. Later at 0940Z (1040NZDT) I found VK3RED and VK3RGI beacons and started calling again on 144.1. By this time Ch5A was S9 and VK2ZT up to S7, then worked VK3EK, VK3DUT, VK3OE and heard VK3VFO but he had high noise level and was unable to hear me. Then I heard VK5DK, Mt Gambier calling CQ, called him but again he couldn't hear me. I called him on CW and he came back with a 529 report and we completed the QSO at 1050Z. At 2629 km this is the longest distance I have worked on 2 m tropo.

Now looking forward to some good 2 m Es...

It was certainly a very good day to finish up 2011.

70 cm Meteor Scatter SSB contact

Meteor Scatter contacts on 70 cm are extremely difficult because of the very short duration of pings. To complete an SSB contact is quite an achievement. Adrian VK4OX and Arie VK3AMZ succeeded with such a contact recently as reported by Adrian:

On 2011-12-14 between 1700Z and 1830Z, I completed a successful 2-way SSB QSO with Arie VK3AMZ, on 432.360 MHz via meteor scatter. We were using pre-recorded voice messages similar in format to FSK441, stored in a Meteor Scatter program called Multikeyer. We were using 15-second periods.

The Geminids Meteor shower was predicted to be at its maximum that morning. OH5IY and other programs predicted the best time for a QSO between QG63kf and QF22fe as being 1730Z to 1830Z on 2011-12-14. That was Thursday, 15th Dec between 0300 and 0430 my local time or 0400-0530 Melbourne time.

We started at 1700Z. I got only a few pings in the first hour but no useful information. I had been transmitting the same message, Callsigns only, for over one hour. At 1808Z I received a beautiful burst from Arie with both callsigns and a report. I changed my Tx message to mostly "Roger 27" because I know that Arie must have both callsigns, otherwise he would not be sending a report. Nothing for about 20 minutes then the best "QSL" I have ever received.

Similarly, Arie received one burst of callsigns and another of "Roger 27".

This then, I believe, satisfied our requirements for a valid SSB QSO over a distance of 1457 km. I believe this to be the first ever 2-way SSB QSO on 432 MHz meteor scatter in Australia and perhaps the first

ever 2-way SSB QSO on 432 MHz between VK3 and VK4 via any, non-EME, propagation mode.

Spring VHF/UHF Field Day

Unfortunately, the Spring Field Day was a washout in much of the country, coupled with high winds in some areas. This meant that participation from field stations was down, but activity was reasonable nonetheless.

Tim VK5ZT was busy roving around South Australia as he reports:

As usual I was out and about in the van carrying all bands to 24 GHz. I trialled a new mount system on the van, so that I did not have to deploy tripods or the like when arriving at a site. This included three dishes and a Yagi on a frame on the back of the van and other antennas on the roof. Unfortunately pressures of work meant I had little preparation time and could not include the rotator I wanted to install. This proved to be a frustration when dealing with stations that were anywhere within a 180 degree arc. I had to move the van sometimes to get good signals.

I started out at the bottom of Yorke Peninsula at the Port Giles silos PF84 (see the photo on the WIA VHF/UHF Contests page, if it's still there!). Conditions were pretty poor for some reason. I was beaming into a raincloud to get across St Vincent Gulf. Only a few contacts on 23 and 9 cm were made, along with a few on the VHF bands. Realising I was getting nowhere, I moved north, calling in on Andy VK5LA who was operating out of a beach shack at Wool Bay. On arrival at Ardrossan PF85 I found the lookout was closed for maintenance so had to move up into the hills behind the town. I found a likely spot and was able to work Iain VK5ZD operating as VK5LZ in PF96 on all bands to 10 GHz. We could hear signals on 24 GHz but there was some sort of noise problem and we were not able to exchange numbers. I also worked John VK5NI across the gulf on various bands up to 10 GHz and a collection of VHF stations around Adelaide.

Moving north, I stopped at Port Clinton, just across the transition to PF95. My initial site turned out to be in the middle of the world's largest bull ant nest and they were somewhat upset with my presence. Rapid redeployment was required! From here I managed all bands to 10 GHz up to Iain who was still in PF96 at Nantawarra and also a few contacts to VK5NI and others north of Adelaide. 24 GHz was no better... plenty of signal but all noise!

I continued my northward travel until I crossed into PF96, just south of Iain's location. Working him was easy at the range involved. I made a few other contacts on bands up to 23 cm before moving on to meet Iain and the 5LZ crew at Nantawarra. This is a favourite site of mine and only about 20 minutes south of my home in Snowtown. As the 23 cm beam had suffered a mechanical failure and 24 GHz was a dead loss I decided to go home to make repairs and do some tests on the 12 GHz synthesiser in the 24 GHz unit. All this took about an hour with no joy on the 24 GHz setup. While I did that, VK5LZ relocated to a site we have used before near Kulpara in PF95.

Hitting the road again at around 1930 local, I headed west into the fields northwest of Kulpara in PF86. From a low hill I could work back to VK5LZ on all bands to 10 GHz. The hill I was on was actually in the middle of a wheat field which fortunately had recently been harvested. I did not come to the attention of the local farmer who lived just down the hill so avoided the usual lengthy explanation of what I was doing. Not many other contacts out there as the site is shielded from the city by low hills. By now it was around 2100 local so I relocated to PF95, just down the road and worked VK5LZ on all bands again before joining them at Kulpara and enjoyed a coffee with the crew. As things were pretty quiet, I headed back home at around 2200 for some much needed rest.

On Sunday I went back to Nantawarra PF96 and worked a few stations up to 23 cm and a solid contact to Keith VK5AKM at Wasleys on 9 cm. The Nantawarra site is just north of a grid transition so a five minute drive put me into PF95 to work everyone again! I discovered I had left some items of clothing on the roadside the previous night at Kulpara when I was getting changed into warmer clothing. I decided to retrieve them before returning to Nantawarra for the last half hour of the contest and three hours since I was last there. This turned out to be a messy exercise as I took a wrong turn when coming back on an unfamiliar road and when trying to correct the error without retracing my steps I found myself in a huge wheat field and ended up crossing it to get to a convenient exit – remember, I am not in a four wheel drive!! Some interesting moments were had dealing with very sandy soil and deep weeds!!

I made it back to PF96 with 15 minutes to go and managed contacts with everyone I could hear including Keith at Wasleys again on 9 cm.

Total travelling distance, just under 600 km. Equipment failures, a broken 23 cm beam which I fixed, 24 GHz non-functional and still under investigation.

I had interference from a computer monitor in the van on two metres. I will be replacing that with an industrial RF screened unit with a touchscreen before the next outing. All other microwave gear worked well and the dishes survived the rough roads, around 100 km of dirt and paddocks!

In terms of numbers, there seemed to be a lack of operators around but a couple of new faces on the microwave bands. Not checked the final score but it was just short of about 5000 points I think.

Just another roving weekend.....

Please send any Weak Signal reports to David VK3HZ at *vk3hz@wia.org.au*

Digital DX Modes

Rex Moncur VK7MO

Meteor Scatter - Call for North Queensland operators

A number of stations including Kevin VK4UH, active on two metre Meteor Scatter from south east VK4, are interested in turning their beams around and arranging tests and skeds to stations to their north. Contacts out as far as Cairns and Mount Isa should be easily within range. Any two metre station equipped with a sound card interface, an eight element Yagi and 100 or so watts should be quite capable of

having a go even with no experience of Meteor Scatter operation. Suitable times, frequencies and guidance can be arranged. Any operators interested in participating in some skeds or finding out more about Meteor Scatter activity are invited to contact Kevin VK4UH on *vk4uh@wia.org.au*

2 metres FSK441

Welcome to Wayne VK2XN who completed his first FSK441 QSO with Arie VK3AMZ. Congratulations to Arie VK3AMZ on working Bob ZL3TY on 15 November over a distance of 2327 km. This is the first completed FSK441 Meteor scatter contact to ZL from west of Melbourne. The contact was probably the result of Leonids even though we are well past the Leonids peak and the next peak won't occur for another 20 years.

70 cm FSK441

Arie VK3AMZ reports:

On 13th December at 1919 UTC, Adrian VK4OX and I completed another FSK441 432 MHz meteor scatter QSO. This was the day before the Geminids were expected to reach their maximum hourly rate. The total time to complete was approximately an hour and forty five minutes. It was an excellent primer for the 70 cm SSB M/S contact on 14 December, reported separately in the 'Weak Signal' section of this column.

The pings for the better part of the schedule were very short but Adrian had received a huge ping very early into the schedule which lasted over two seconds. In our experiences the duration of this ping was extraordinary for 432 MHz! Not to be outdone, an hour into the schedule I received a 2.6 second ping from Adrian. For the remainder of the sked, pings where very infrequent and short lived until 1916 UTC when I successfully decoded Adrian's confirmation report with a brief but very strong ping.

It has been our experience to date that meteor pings on 432 MHz are very short but can be very strong. It is not unusual for pings to be 20 dB above the receiver noise floor.

Please send any Digital DX Modes reports to Rex VK7MO at *rmoncur@bigpond.net.au*

The Magic Band – 6 metre DX

Brian Cleland VK5BC

November and December were very interesting on 6 m. The band opened to Japan and China on many days with most call areas of VK and ZL experiencing openings. Hawaii also made several appearances into VK including VK6 on 18 November. Contacts were also made into central America, in particular Costa Rica TI5, Mexico XE, from the east coast of South Cook Island E51EME, New Caledonia (several FK8 stations), Samoa 5W1SA and Rotuma Island 3D2AG/p.

The real surprise though came on New Year's Day with a great opening to the W5 area of San Antonio, Texas. The band opened at approx. 0030Z to 0130Z with contacts being made from VK2, 3, 5 and 7 in both CW and SSB with several W5 stations and XE. John VK5PO reported working 2 x Ws at 0020Z in CW which started the fun which followed with contacts being made by several stations. Garry VK5ZK managed contacts with W5OZI (CW 5/5), W3XO/5 (SSB 5/7 excellent), K5RK(SSB 5/5) and N5TSP(CW 5/5). Garry was using a 4 element Yagi and 100 W. Roger VK5NY reported working 3 x W5s plus one XE station while Bill VK5ACY worked W3XO/P in EM00 SSB 5/5 both ways, K5RK in EL29ii at 5/2 and received 5/5. Bill also heard XE2HWB. Bill was using an 8 element ATN Yagi and running 400 W. Peter VK5PJ in the Barossa Valley also completed several contacts on CW and SSB. Jeff VK5GF in Victor Harbour also worked W3XO/5 SSB.

Several VK3s also managed contacts into W5 including Steve VK3ZAZ, Andrew VK3OER, Ken VK3AKK, Geoff VK3AMK and Arie VK3AMZ. Andrew's VK3OER remote station is certainly proving a big success for him. Meanwhile Frank VK7DX completed a contact with W3XO/5 SSB 5/5 both ways. The opening extended north to Leigh VK2KRR at The Rock near Wagga Wagga with Leigh also completing with Bill W3XO/5 at 5/5 both ways.

Pat W5OZI's log shows CW contacts not in order as follows - ZL1GO, ZL1NK?, VK5PO, VK5ZK, VK3AMK, VK3AKK, VK3AMZ, VK3ZAZ and VK7NO? The first worked at 0045Z, the last at 0145Z. Certainly one of the best W openings from southern VK.

Pictured below on Figure 2 is a snapshot from VKLOGGER from the morning of the 1st January.

In some late news this was followed by an opening from VK2 and VK4 to Costa Rica TI5 on the morning of the 2nd January. Certainly a great start to the New Year and with the sunspot cycle on the improve, it certainly should be an exciting year on 6 metres.

In some other news, some good openings to KH6 from VK5, the best on the 28th November when signals were up to 20 over S9.

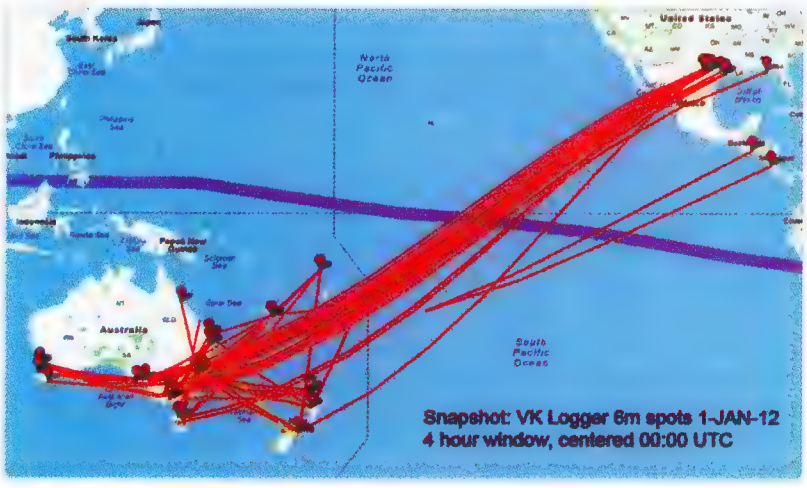


Figure 2: A snapshot of the VK Logger 6 metre spots on 1 January, 2012.

1st December – some Es from VK5 to northern VK4 in the morning which gave VK3 some TEP extension to JA a little later. Mid-afternoon saw Li BA4SI working into VK3 and VK7 with Joe VK7JG reporting 5/9 signals.

3rd December – A good day in New Zealand with all ZL call areas working into Mexico and some Ws in the morning; unfortunately there was no extension to VK. This was followed a little later with an opening from ZL to JA. In VK very little to report with the only excitement being Willem DU7/PA0HIP working VK4's CZ, DDC and WR later in the afternoon followed with a contact to Mark VK8MS in Darwin and Rod VK6KP in Karratha, WA.

5th December – A great day for Bob ZL1RS in northern NZ who worked several countries including TI, YS, TG, YN, XE, YV, W6, KH6, DU, JA, ZL, E5 and VK.

7th December – mainly Es VK5 – VK6 and VK4, late in afternoon VK6 to JA.

Tony VK6PP reported a very good 6 metre opening here in Perth on 16 November with many JAs. Stations worked as follows: JP1LRT 0753z SSB on 50.200 MHz, JR6EXN 0757z SSB on 50.200 MHz, JA4UDN 0806Z SSB on 50.130 MHz, 18th November stations worked were JA6TEW 0906Z SSB on 50.140MHz and BA4SI 1011Z CW on 50.100 MHz. China was a new country on 6 metres.

Andy VK6OX reports the following activity from VK6:
The source of this info is Graham VK6RO, a widely-known and respected 6 metre operator who has carefully recorded activities on this band across the last few sunspot cycles. Graham has advised me that on October 19th there was an opening to not only VR2 but also DU, stations being heard or worked VR2XMT and DU7/PA0HIP. This opening occurred from about 1300Z to around 1430Z (10.30 pm local). According to Graham, this was a rare occurrence, the last time an opening like this was March 29, 2001 and it was open until 00.30 local time (past midnight).

On to November. Compared to October this was a much better month for the lower half of VK6. With 'Old Sol' finally making the ionosphere (in several levels) more reflective than absorptive we in VK6 finally had some activity.

From this QTH, the 1st Es activity for the season occurred on 2nd November, with VK5BC and VK5PO being worked around 0750Z.

3/11/2011: Band opened to JA with areas 1,2,3,5 and 6 being worked from 0525Z to 0600Z.

9/11/2011: Very brief Es propagation to VK5…worked VK5BC to S5.

14/11/2011: R1/C1 TV signals around 49.75MHz were in early...by 0540Z JA6 stations were heard. Worked JAH6CDI, JJ6JGJ and JH6BPG over a sixty minute period. Signals to S7 from Japan.

16/11/2011: The first really good opening to JA for this cycle with JA1,2,4,5,6 and 7 areas worked from 0700 – 0800Z.

18/11/2011: With the assistance from Sporadic-E across central VK, worked Fred KH7Y in Hawaii at 0328Z CW 559 both ways, and again at 0334Z SSB 55 both ways. Several other stations in Perth area also got in on the action including VK6RO, VK6KXW and VK6JJ. Art KH6SX was also heard or worked during the opening. Later on in the day, from 0900 – 0920Z, the band opened to JA6 area with Masa JA6TEW and Hide JR6EXN being worked during this period. The second highlight for me occurred just a short time later when I worked Li BA4SI from WuJiang City both CW and SSB with sigs to S5. All in all a good day on 6m!

26/11/2011: More Es propagation during the late afternoon towards the east, with VK5s BC, PO, RO, PJ and ZPS being worked along with VK3DUT and VK3ER/P.

28/11/2011: ZL TV video carriers on 45.2396, 45.250 and 45.260 to S5 with deep QSB from 27/2330z. At 0052Z, worked Bob ZL1RS CW 529 both ways. Throughout the day, further Es openings occurred to VK5.

Meanwhile from VK2, Kerry VK2BXT reports almost daily TEP to Japan in November with better openings as follows:

7/11/2011: Worked JR6EXN, JH1WHS. Heard JA7, JA4, JA3, JH6.

8/11/2011: Worked JA8TSG, JA7OQ, JE1SSE, JA8CAR, JA3EGE. Chinese TV 49.750 S9 plus with spots across lower end of 50 MHz and 43.650 S9 plus.

9/11/2011: Worked JA1CUOI, JA1FNA, JL8GFB. 43.650 only indicator.

11/11/2011: Worked JA3EGE only at 0742Z. FK8 beacon and FK8CP heard at the same time. He does not reply to calls if he has you in his log!

13/11/2011: FK8CP S9 calling CQ on phone and CW constantly. No VK replies!

From Wayne VK4WTN's log the following:

1/11/2011: KH6SX 579, FK8CP 59+, XE1FAA 529, TI2CDA 53, TI5XP 519.

6/11/2011: HL5BMX 529.

7/11/2011: BD6AHU 55, BA4SI 589.

8/11/2011: HL1IBG 559, DU7/PA0HIP 429.

9/11/2011: BH4QFI 54, HL3ERG 59+, DS2CYI 42, KH6U 55.

10/11/2011: BA4SI 529, KH6SX 55.

14/11/2011: KH6SX 529.

18/11/2011: BA4SI 599.

19/11/2011: KH6SX 539, KH7Y 56.

20/11/2011: KH7Y 539.

23/11/2011: KH7Y 59, KH6RH 55, KH6SX 599.

28/11/2011: AH7C 559.

6/12/2011: KH6HI 559, KH7JJ 559, KH6SX 53.

Graeme VK4CAG reports a great opening to JA. On 9/11/2011 at around 0500Z I heard a few weak JAs and decided to call CQ on 50.130. That started a pile-up that lasted for nearly three hours with 108 JAs from all JA call areas and one Korean station DS1QMV worked. Signals were mostly 59+. Many were still calling as the band faded out at 0745Z. JA2DBQ reported his first 6m DX QSO - he was using a 24 MHz

dipole. JH1ACA, a YL operator using a ground plane worked her second VK contact - check out her QRZ page! There were two QRP stations, one running one watt and a couple of mobiles.

The experience was entirely different to when we used to work into JA with 10 watts of AM and most transmissions crystal locked to a fixed frequency, back in the early 1970s. Just as well we worked 'split' as it would have been impossible to work a pile-up on AM!

Thank you for all those who have forwarded me information to assist me in putting these notes together each month. Please send any six metre information to Brian VK5BC at *briancleland@bigpond.com*

Silent Key

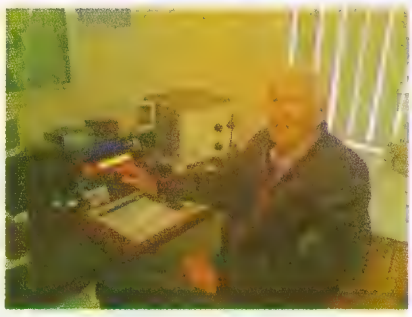
Vic Kitney VK6VK

The key of Victor John Kitney VK6VK from Bunbury fell silent on 26 November, 2011. Vic had fought a courageous battle against cancer in one form or another for over ten years; he was aged 82.

Born in Donnybrook WA in 1929, he had been interested in wireless (as it was then known) from an early age. This interest came about because his late father Jack VK6AV had an interest in all things electrical as well as wireless. Vic often constructed crystal sets and valve receivers in those early days. He left Donnybrook when he was 14 years old and went to Harvey where he became a projectionist at the local picture show as well as working in the Harvey power house. He was fascinated by steam powered engines and their relationship to power generation.

In 1948 Vic joined the RAAF where he trained as a WOM (Wireless Operator Mechanic) at the then RAAF School of Radio at Ballarat. During his RAAF service, Vic also studied at the Marconi School of Wireless in Queens Street, Melbourne. As a result he gained a First Class Commercial Operators Certificate. Towards the end of 1949 Vic passed his 'Ham' ticket and became VK3AVK, at Ballarat. He was soon transferred to Perth where he became VK6VK. One of his accomplishments was in being among the very first VK6 amateurs to use the (then) new SSB mode extensively in his hobby.

During his stint in the RAAF, Vic spent time at Laverton in Victoria, Lee Point Receivers in Darwin and a brief attachment to the



Montebello Islands after the Big Bang. He also spent time at the No 3 Telecommunications Unit at Pearce.

After leaving the RAAF Vic worked in commercial radio. Whilst working at Radio 6AM in Northam, WA, he began to think about SSB, having been introduced to ISB transmitters at Point Cook whilst in the RAAF. An officer suggested at that time that he should try SSB as a 'ham' operator. So in 1955 he managed to scrounge bits and pieces to build up an SSB exciter using the 'phasing method'. In 1956 he went on air using SSB and immediately drew a letter of comment from the monitoring station in Perth. They were concerned that the emanating signal was distorted and asked him to cease all transmission. A letter of explanation about SSB cleared up the problem. They had not recognised the SSB mode of signal transmission, leaving a few red faces in the Department.

Vic was to move around quite a bit during his career. In 1960 he decided to venture into television. During the 1960s he was to work at both TVW7 and STW9 in Perth, then in 1968 accepted his first appointment to the Antarctic Base at Mawson, working in the role of Senior Technical Officer Communications. On his return he re-joined TVW 7 and then spent some time at the Mt Goldsworthy TV facilities near Port Headland where both channels 7 and 9 had set up a 'cable' TV service for local residents. He later moved to Tasmania, working as a transmitter technician for TVT6 in Hobart. In 1983 he returned to Antarctica, where among many changes being made at that time were a number that eventually saw the end of HF communications as the principal means of communication back to Australia. Upon completion of his contract he remained in Hobart. Following the passing of his wife Maida in 1987, he moved to Bunbury, working for a television repair business. After four years he returned to Tasmania and set up a small repair business at Swansea, on the east coast. Following his cancer diagnosis, he decided to settle again in Bunbury, where he was to spend the rest of his life.

As an amateur Vic was to first operate almost exclusively in CW, but later came to love SSB and, later still, developed a passion for RTTY.

Radio, television and more so amateur radio played a huge part in Vic's life. I am sure he will be sorely missed by all those he knew in the world of amateur radio as well as his ex-work colleagues and family.

'Signing off for now'.

Submitted by his son Roger Kitney VK6RF.

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Don Jackson VK3DBB

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Hamads

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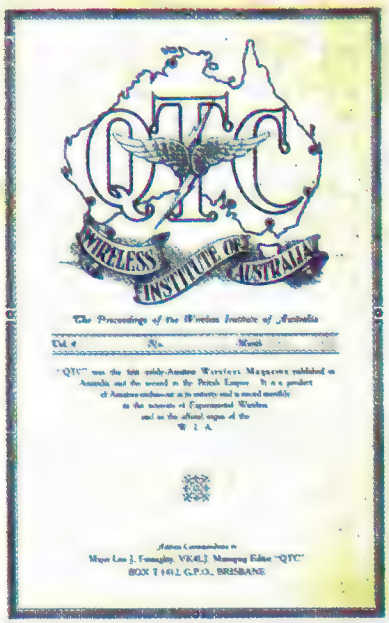

Early copies of QTC magazine.
The WIA Archive is seeking early copies of QTC magazine for copying and/or adding to the WIA Archive's shelves.
QTC was published in Queensland and claimed to be the first solely Amateur Wireless magazine in Australia and second in the British Empire!
The format was duplicated foolscap pages stapled, with a light blue/grey front cover. QTC was published in the late 1920s/early 1930s, ceasing in November 1931; VK4LG was the dedicated editor. There was a later version in Queensland.
We are presently interested in the early editions only.
Please contact Peter VK3RV via email *vk3rv@wia.org.au* or c/o the National Office in Bayswater if you can help us locate this important part of our history.

FOR SALE – NSW

Icom transceiver, model IC-7400, Serial No 01449. In as-new condition, complete with power cable, mike, and operating manual. Service history provided, and recently serviced by Icom. It comes with original carton and packing. Has all HF bands plus the six metre and two metre bands, three antenna connections, button band selection and auto antenna tuning for HF bands. Many other features outlined in the operating manual. It has had very little use. Price $1,500 or near offer.
Telephone Stan VK2AYL on 02 4981 7173 - leave message if unanswered and your call will be returned.

Nally radio tower, 13.7 m free standing, telescopic and tiltover. Slab mounted with J bolt assembly, comes with antenna mounting pole, three metres, floating bearing and mounting plate with weather shield. Also includes drawings and computations. Three years old and never used or installed. I must sell as I cannot get council permission to install in the area required. All up cost was $6371.00 will sell for $2850 ONO.
Also large collection of telegraph keys, sounders, books, etc. Prices on application.
Also Cushcraft three elememt six metre beam. Brand new in box, $125.00.
Yaesu FT-101Z, which can turn on, but cannot apply drive. $200.00 ONO.
Contact Stephen VK2SPS, at *vk2sps@froggy.com.au* or phone 02 9456 0130 or 0415 559 784.

Icom IC-7000 all mode transceiver, S/N 0803164, brand new.
Icom power supply, 25 amp, S/N 80478291, brand new.
Icom AH-4 auto tuner, S/N 0214170, brand new.
1-0301 Benelec 0301 Power/SWR meter, brand new.
Kenwood TS-43x transceiver, needs realignment.
For all the above equipment, $2000.00. I do not want to separate. Reason for selling – I am going into a retirement village. Contact George VK2DJR, phone 02 6687 4807 QTHR or *vk2djr@bigpond .com.au*

FOR SALE – QLD

House and land for sale with Council approval as a radio transmitting site. Land area is just less than two acres (6797 sqm). House area is 310 sqm, five bedrooms, of which two bedrooms are part of a Granny Flat. Covered verandas surround the house. Two bathrooms, with provision for a third. Three entertainment areas. ADSL2+ Telstra. Double garage plus a double car port. Also a car port for a motor home, with 3.5 metre clearance. The tower has been taken down but footings are in place. The antennas are in place, a full size 80 metre horizontal loop and an 'off centre fed Windom'.
Property is located at Clear Mountain, approximately 35 km north-west of the Brisbane GPO.
Offers over $649,000.
For more information and pictures on CD, please contact Malcolm VK4ZMM at email *vk4zmm@bigpond.net.au* or phone 07 3298 5454

Winch up four section Kismet tower complete with stainless wire rope guys (for three sections), stainless turnbuckles, three equaliser plates and an oversize winch; documentation is included.
Price $300.00 – pick up only or will help organise transport if required.
CDE Model H-III/CD-44 220VAC rotator controller, with two motors and cage for the top of the tower, to house the motor and mast tube. $300.00.
Malcolm VK4ZMM, email *vk4zmm@bigpond.net.au* or phone 07 3298 5454.

WANTED – QLD

A tower to support VHF and UHF Yagi arrays, height required around 9-10 metres, preferably free-standing. Should be square or triangular section, and will be used to support large six metre, two metre and UHF antennas. It should provide for mounting of a rotator and a pole to mount antennas on, and be able to withstand south east Queensland storm winds.
Contact Tim VK4TIM on 0415 947480, *vk4tim@iinet.net.au* or QTHR address.

FOR SALE – SA

Kenwood TM-D710A, 2 m/70 cm, 50 W dual-band, dual in-band receive, 1000 memories, has all the latest features. It is an excellent performer. Current model as new in box with all supplied accessories. S/N 90800396. There are no modifications and it is in immaculate condition. Cost me $895, sell for $680 o.n.o.
VK5OO QTHR or phone 0412 000 076.

Contributions to Amateur Radio

AR is a forum for WIA members' amateur radio experiments, experiences, opinions and news.

Your contribution and feedback is welcomed.

Guidelines for contributors can be found in the *AR* section of the WIA website, at *http://www.wia.org.au/members/armag/contributing/*

Email the Editor:
editor@wia.org.au

About Hamads

- Submit by **email (MUCH PREFERRED)** or if written and mailed please print carefully and clearly, use upper AND lower case.
- Deceased estates Hamads will be published in full, even if some items are not radio equipment.
- WIA policy recommends that the serial number of all equipment for sale should be included.
- QTHR means the address is correct in the current WIA Call Book.
- Ordinary Hamads from those who are deemed to be in general electronics retail and wholesale distributive trades should be certified as referring only to private articles not being re-sold for merchandising purposes.
- Commercial advertising on these pages Contact *admanager@wia.org.au*
- Copy to be received by the deadlines on page 1 of each issue of Amateur Radio.
- Separate forms for For Sale and Wanted items. Include name, address STD telephone number and WIA membership number.

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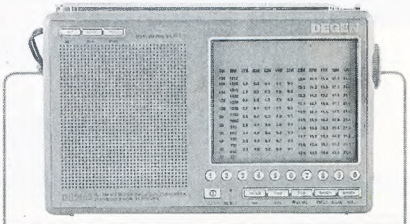

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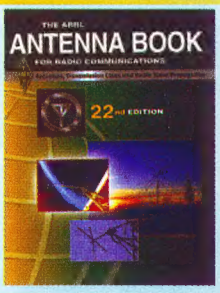

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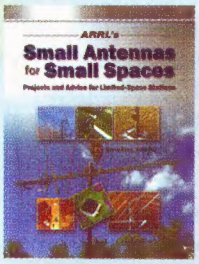

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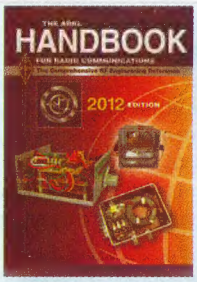

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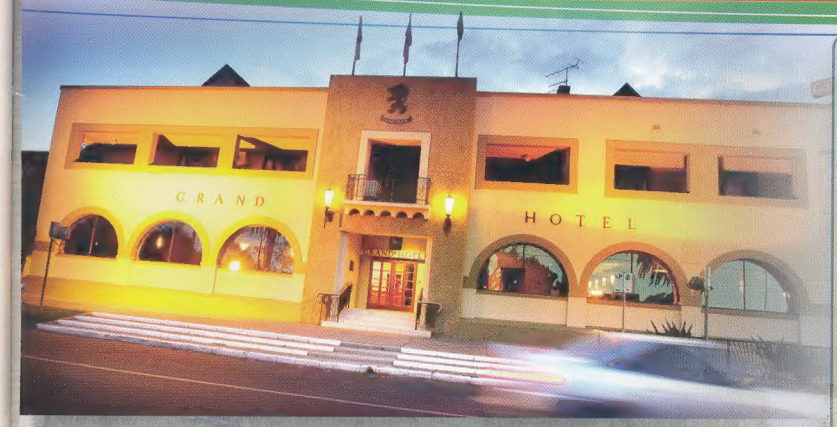
2012 Annual Conference

Friday 25 - Sunday 27 May 2012



WIA Annual Conference Mildura 2012

Host Club: The Sunraysia Radio Group

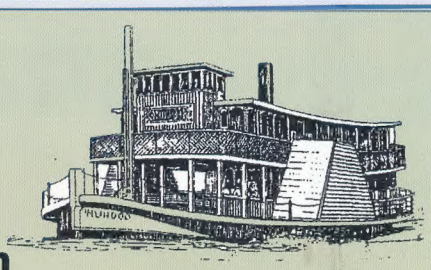
The 2012 WIA Annual Conference will be held in Mildura, Victoria, on Friday 25, Saturday 26 and Sunday 27 May 2012.

The 2012 Conference will be centred on the Mildura Grand Hotel and on Sunday lunch on the Paddleboat Mundoo, with a special Conference station, a special callsign and special QSLs.

To book

Make your bookings directly with the Mildura Grand Hotel on either the free call number 1800 034 228 or the hotel's number 03 5023 0511, stating that the booking is for the WIA Annual Conference 2012.

We suggest that you request to speak to either Kelly Lang or Ian George when making your booking.



Program

Friday 25 May 2012

2 pm to 5 pm	Registration at the Mildura Grand Hotel
6 pm	Buffet Dinner at the historic Settlers Club with Alan Cameron, Mildura businessman, balloon pilot and marriage celebrant "Sunraysia – Past, Present and Future".

Saturday 26 May 2012

8 am to 9 am	Registration at the Mildura Grand.
9 am to 12.45 pm	Annual General Meeting and Open Forum, Mildura Grand Ballroom.
1 pm to 2 pm	Lunch.
2 pm to 5 pm	Symposium (A technical program, details to be announced).
6 pm to 7 pm	Drinks in the Club Lounge.
7 pm	Annual Dinner, Hot and Cold Carvery Buffet, Mildura Grand Ballroom.

A Partners Tour will be available for Saturday, including visits to some of the highlights of the area. The cost of that tour will be included in the registration fee.

Sunday 27 May 2012

11.30 am to 3.30 pm	Cruise and lunch on the Paddleboat Mundoo.
5.30 pm	The Host Club's event – for those staying for Sunday night, a casual BBQ at the home of Noel Ferguson, Fergus Park, Nichols Point (Details at Registration).

Registration

On-line registration is available now on the WIA website, or you can register by phone to the WIA office.

When you register we will send you the, Mildura – Sunraysia Tourist Guide, so you can plan what else you will do in the Sunraysia area.

Shortly before the Annual Conference we will send you the Open Forum documents.

Further Information

Watch the WIA website for further information.

The WIA Directors and the Sunraysia Radio Group hope that you will join us in Mildura for our next Annual Conference for what we know will be a memorable weekend.

Volume 80 Numbers 1 & 2 JANUARY/FEBRUARY 2012 Print Post Approved PP349181/0042

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